

MICHIGAN FARMER



VOLUME XVI.

DETROIT, MAY, 1858.

NUMBER 5.

R. F. JOHNSTONE, Editor.

THE MICHIGAN FARMER.

Published monthly by ROBERT F. JOHNSTONE, Detroit, Mich.
Office on Jefferson Avenue, No. 120 Agricultural Rooms,
Next door to Peninsular Bank.

Terms.

For any number of copies not exceeding four.....\$1 00 each
For a club of any number from five to ten.....80 cts "
For clubs of any number not less than ten.....75 cts "

All letters to be addressed to ROBERT F. JOHNSTONE, Detroit Mich., (post paid.)

Advertisements.

All advertisements for the Farmer must be sent forward so as to reach us by the 20th of each month.

Rates of Advertising.

For a square of ten lines, single insertion.....\$1 25
For each subsequent insertion.....1 00
For advertisements making over one square, and for periods of over three months, our terms will be liberal.

The attention of Breeders of Stock, Nursery men, Florists, Seedsmen and Agricultural Implement Manufacturers, as well as those who wish either to buy or dispose of farms or farming lands, stocks, &c., is particularly called to the advantages which a circulation of nearly twelve thousand offers to them throughout the State of Michigan.

CONTENTS.

Agricultural.

Labor and Profits of a dairy Farm.....	125
Pigs to be kept with a dairy.....	126
Congress and Agricultural Schools.....	128
Some notes about Hereford and Shorthorns.....	130
Large and small seed potatoes.....	131
Grand Traverse County.....	132
Sheep Washing.....	133
Corn and potatoes.....	133
An Englishman in the woods of Genesee.....	135
Millet for food—Monthly crop.....	135
Our Note Book—Oakland county.....	136
Morgan Horses compared.....	139
Plan of a cheap barn.....	137
The Sorghum.....	138
Analysis of Soil.....	139
New American Cyclopaedia.....	140

Horticultural.

State Agricultural College—What will it do for Horticulture.....	141
Standards vs. Root-grafts.....	142
Apples.....	143
Five young plums.....	144
The cucumber.....	144
Horticultural Notes.....	145
Cultivation of Chufas.....	146

Editorial.

A few words to subscribers in arrears.....	147
Passage of the Agricultural School Bill.....	147
Notes and Queries.....	148
Horse training.....	148
Notes about Sassafras.....	148
Planting tobacco.....	149
Stock Register.....	149
The Markets and the Prospects.....	150
Price of wool.....	150

The Labor and Profits of a Dairy Farm.

In the previous chapter we endeavored to give a fair idea of the amount of land, buildings and labor which would be required to supply a herd of forty milch cows with food and shelter, together with the labor necessary for their care and management. We have now to deal with the indoor work, incident to the changing of the raw products, into the manufactured article fit for merchandize.

6. What amount of labor will be necessary for the manufacture of milk into cheese and butter? Much will depend upon the conveniences and fixtures furnished by the proprietor; and also whether the proprietor himself can superintend the whole manufacturing process, or has to entrust it to an experienced cheesemaker, either male or female. We believe that with the vats, boilers, milk and whey conductors, washing and cleansing apparatus, hot and cold water pipes, cheese presses, shelves and tables, all arranged with a design to economise work, that one smart experienced woman with the assistance of another to be had at the usual rate of wages, would be able to do all the manufacturing. But where the dairy business forms only part of the business of the farm, much of the work must be done by a man. The labor of the manufacture would consist, therefore, of a man's time for two thirds of the year, and of a woman for the same time. Their whole time would probably be occupied in the business of the farm, but only this proportion should be charged to the cost of manufacture.

As to the plan of milk rooms, cheese rooms, and the fixtures, with the best methods of manufacturing either cheese or butter, they do not belong to the matter now in hand, which is only to inquire into the cost and profit of a dairy of 40 cows in this State.

7. What should be the average produce of the forty head of cows for the season, and what amount of cheese should be yielded from their milk; and what would be their other products?

In starting a dairy it will not be found possible the first year, to have all the cows come in at just

such seasons as may be most desirable ; but after that, by a little attention and proper management, the calving of the whole lot may be regulated so that all may be in full flow of milk by the 15th of May ; and from that time to the first of August, the whole forty should average 12 quarts each per day ; which, for the 77 days would be 9,240 gallons. The usual yield of cheese per gallon, for this season of the year, according to the records furnished by the best Herkimer county dairymen, ranges from a pound to one pound two ounces, the largest yield of of cheese being in the spring and summer months. According to this ratio, therefore, there should be made 10,395 pounds of cheese in the first 77 days. For the next term of three months the average yield of each cow will decrease at least one fourth, leaving it at the rate of nine quarts per day. This would afford 8100 gallons of milk for the whole of this second term, giving at the rate of one pound one ounce of cheese per gallon, or a total of 8606 pounds of cheese. This would bring the cheese-making season to an end about the first of November, from which time until the cows are dried off, the manufacture of butter would be probably most profitable, as at that season the milk is richer in oil, affords less curd, and fresh butter commands the highest price.

The whole product of cheese for the year would be as follows :

77 days, 9240 gallons of milk at 18 oz. per gall. . .	10,395
90 days, 8100 do do 17 oz per gall. . .	8,606

Total cheese made from May 15 to Nov 1. . . 19,001

From November 1, to March 1, the average produce of milk per day may be calculated at 4 quarts from each cow ; some of course will yield more ; but if from a herd of 40 that amount is obtained from the first of November till the first of March, they may be considered a good lot, and well taken care of. The total amount of milk for this third term will be 19,200 quarts, or 38,400 pounds. If we take the ratio of milk to butter as given by Mr. Thomas Hoskins in the Farmer for April, or one pound of butter from 25 pounds of milk, we would have 1536 pounds of butter. But milk at that season should give a greater proportion of butter, and with feed in kind and quantity, suited to promote the production of butter, it might be that a pound of butter would be produced by every 20 pounds of milk, which would make a difference of 20 per cent.

For the third term, from March 1 to the middle of May, the whole produce must be considered as belonging to the calves, and to be in part repaid by their sale.

The whole yield of the 40 head, in butter and cheese, would be as follows :

19,000 pounds of cheese at 9 cents,	\$1,710 00
1,920 pounds of butter at 18 cents,	345 60
	<hr/> \$2,055 60

This would make an average of \$56.14 per cow, or 475 pounds of cheese, and 48 pounds of butter from each cow per year. This is not an extraordinary yield. A. L. Fish of Herkimer county, N. Y., reported to the N. Y. State Society, that in 1844, the produce of his dairy was at the rate of 700 lbs. of cheese per cow, and in 1845, it was as high as 775 pounds of cheese from each cow of his herd.

Mr. J. C. Morton gives 500 pounds as the annual yield of a cow in the celebrated cheese district of Gloucestershire, England. In the Ayrshire districts the average is something above this, whilst in some places of Great Britain, the average does not reach much over 350 pounds per annum. This difference arises from local systems of manufacture, feeding, and other causes.

Cheese and butter, however are not all that the dairy yields. There are, besides, the whey, the skim milk, and the buttermilk, which ought all to be used in the manufacture of pork of the best and sweetest kind sent to market. This offal of the dairy is not to be relied upon alone ; it too requires management, and to be mixed with the offal of grain, and a certain proportion of grain itself. No dairy should be without a piggery attached to it. The number of hogs which may be kept by a dairy will vary according to the fancy of the proprior ter for the small quick maturing breeds, such as the Improved Essex, the Suffolk or the Chinese, or for the large breeds, such as the Leicester, the Byfield, or the Berkshire. The number of pigs which may be kept will also vary with the season. In the summer there is a demand for lean light young pork, or pigs that will dress from 100 to 150 pounds, by the butchers of the large cities. It should be a point with the dairyman to thin out his young stock, as they increase in size, by fitting those most suitable for the butcher. This leaves the store hogs a larger share of food to each, as they increase in size. It is plain therefore, that the dairyman may begin in the spring with some fifty young suckers from four to eight weeks old, and thin them down with profit to himself, to fifteen or twenty. For this kind of feeding we incline to favor the Suffolk or Essex breeds, or high grades of them. Of the large breeds, one hog of three or four months old to two cows will be found almost as good as the offal of such a dairy will sustain.

For the food of these hogs, there should be calculated that at least 75 per cent will be the quantity of the offal which will be available, and which during the time from May to November, should be equal to 80 gallons per day. This slop, with an average of four quarts of mill feed to each, counting them at 20 head, should give a fair growth of pork that will make a considerable addition to the receipts of the dairy, as will be seen by the following estimate, which only includes the store hogs, and does not make any allowance for the pig pork sold during the summer and fall seasons :

20 six weeks pigs, worth on the 15th May \$1.50,	\$30 00
Use of a five acre clover pasture for the season,	15 00
4 quarts of feed per day to each hog, for 280 days,	
being 7 tons at \$12 per ton,	84 00
3 quarts of marketable corn to each hog for 60	
days, being nearly an average of six bushels	
to each hog, given when put up for fattening,	
and worth 35 cents per bushel,	48 00

Total cost of 20 hogs besides the dairy sloop, \$177 00

We do not believe it would be unreasonable to calculate that each of these hogs, after being kept in this manner for nine months, should weigh 255 lbs. when killed and dressed; and if they are sold at five cents per pound, each one would bring \$12.50, or for the whole \$250, leaving for labor and for the offal of the dairy \$73, or a profit on each hog of over \$3.50. We consider, however that where either the Essex or the Suffolk breeds are kept, or high grades of either of these, the same amount of feed and care would enable the dairyman to keep thirty instead of twenty, and that instead of a profit of only \$73, he would get from his hogpen, if rightly managed, \$200 for the offal of the dairy. Mr. J. S. Tibbits of Livonia, has stated to us that he has raised at the rate of two pigs to each cow, following a method somewhat similar to the above, and he had most of his store hogs reach 300 pounds within the time specified. He also stated that the calculation with regard to his hogs when he was in the dairy business, was that they should pay for the labor of making the cheese.

8. We come now to the subject of estimating the whole cost of the conduct of a dairy of 40 cows, and to a comparison of that cost with the estimated income.

The cost of buildings to accommodate the cattle, and the cheese and milk rooms, including horse powers, cutting machines, boilers, milk vats, presses, and all the apparatus and fixtures, necessary for economical feeding, and the most perfect manufacture of cheese and butter, should not cost over \$800, and the interest on this for wear and tear, and use of capital, would probably be 12 per cent. making an annual rent of \$96 to be charged to the dairy. Mr. Paris Barber, of Homer, New-York, erected a barn for his 50 cows, a cheese room and milk room, with all the requisite apparatus, for \$582.92, as reported to the New-York Society in 1851. Mr. Moses Eames, of Jefferson county, in the same year, gave the plan and cost of a very extensive cheese house, with copper boilers, caldrons, vats of tin, and all the necessary fixtures, which amounted to but \$432. It will thus be seen that our estimate will certainly cover the whole cost, and is within reasonable bounds.

The following table will give a recapitulation of the money or market value of the various crops grown for the use of the dairy, the labor incident to the work outside and inside, and of the returns which the various productions will yield.

Interest and wear of buildings,.....	\$96 00
Summer feed :	
40 acres of pasture, at \$5 per acre,.....	\$200 00
Cultivation of 3 acres of sorghum,	
or millet, at \$6 per acre,.....	18 00
Cultivation of five acres of green	
rye for spring feed, at \$3 per acre,.....	15 00
Value of meadow pasture in the fall	
with pumpkins, and other feed, ..	100 00
One ton of mill feed,.....	12 00
	345 00

Winter feed :	
50 tons of hay, at \$6 per ton,.....	\$300 00
40 tons of corn stalks, at \$4,.....	160 00
443 bushels of corn at 35 cts.,.....	155 05
10 tons of straw, at \$3,.....	30 00
	645 05

Total money value of food required during the year for 40 head of cows, being at the rate of \$25 per head,.....\$1,036 05

Labor :	
The labor incident to feeding and outside	
work, is equal to 444 days of one man at	
75 cts per day,.....	\$333 00
240 days of one horse, at cost, 30 c.,.....	72 00
Labor in cheese room, half a man's	
time, for one year, at 10s. per day,.....	225 00
Time of one woman at \$5 per month,	
and board, the same,.....	120 00
	750 00

Total money value cost of carrying on a dairy of 40 head of cows,.....\$1,836 05

Against this estimate of the expense, we have the following as the estimated income :

The cheese and butter sold as per rates above	
given,.....	\$2,055 60
The profit on the amount of hogs sold,.....	73 00
30 calves fed during the time between the 1st of	
March, and the commencement of cheese-	
making, principally, at \$3 per head,.....	90 00
Money value of three hundred loads of manure	
made by the cows and hogs, at 50 cents,	150 00
Total value of products,.....	\$2,363 60

Balance, the actual clear profit after a fair market value has been allowed on every article consumed,.....\$527 55

In placing these statements before our readers, it has been for the purpose of showing what are the real profits of the dairy business. There is no single item in the above estimates, which has not been carefully compared with the printed or verbal reports of practical men of our own state, or of the great dairy districts of New-York, or of Great Britain, so far as was possible.

We were led into it, by meeting with a practical friend, who with a farm of four hundred acres was about to "rush" into the dairy business for the first time, and wanted to know how much of his farm we thought it would take to keep the number of cows he had then on hand, and whether we thought it "would pay." In passing through the agricultural districts we come in contact with many such questions and much practice that is adapted to the west alone, and they can find expression and answer usefully only in the form we have above given.

It is too much the practice of many farmers to jump from one department of their business to another, without considering whether they have strength to carry a somewhat encumbered body over the fence or not. The above brief estimates of land,

of labor, of capital and of profits involved in the management of a dairy farm, are therefore submitted with the hope that they will be of use, and also that they will draw out observations and experience from those who are interested in this complicated division of farm labor. Of the care, skill, constant attention, and exercise of judgment requisite to make a first rate cheese, it is impossible to give an adequate idea; that must be learned by actual practice and observation, with the aid and example of competent instructors.

Congress and Agricultural Schools.

An effort was made during the past winter to direct the attention of Congress to the importance of encouraging the formation and permanent establishment of institutions that should connect scientific instruction with the practice of agriculture, by asking for a donation of a portion of the public lands to each state as an aid to establish an agricultural school or college. The bill for this purpose was introduced by Mr. Morrell of Vermont, and named 6,340,000 acres of land as the amount to be donated. In the House of Representatives the subject was referred to the committee on public lands, the majority of which have lately reported against the grant. A minority report has likewise been submitted by the Hon. D. S. Walbridge, the representative of the third district in this state. We have not seen either report, nor is it likely we ever shall; as since General Cass left the Senate the Agricultural Press has been forgotten in the distribution of all those works issued by Congress for the purpose of giving information relative to statistics, to commerce, and to the natural productions of our own and other countries.

There are as yet but two states which have made much progress in the actual work of establishing agricultural colleges on a large scale: these are Michigan and New-York. There are, however, several other states which are entering upon this enterprise, and it may be well to consider at the present time, whether such a grant as that asked for, ought not to be obtained, on the ground of its being a wise and sagacious measure, and also as a means of increasing the value of the public lands, and preventing their deterioration after they have passed out of the possession of the government into the hands of those who render them productive.

Amongst the arguments used to prevent the establishment of such schools, none are more frequently cited than that they must necessarily be failures, as no school of this kind can be maintained or be as successful as those which are devoted to educational purposes only; yet in contravention to this principle, or rather this dogma, we have the very successful military school at West Point, where it is well known science and practice are taught in connection with each other. It may be that it takes more sci-

ence to limber up a gun carriage, than to harness a team to a reaping machine; or that it requires higher educational acquirements to know how to drive a ball down an iron tube than to drive a plough through a forty acre lot so that not a tuft of grass or weed shall be seen on the upturned surface; perhaps the compounding of "villainous saltpetre" is more productive of national wealth than that of compost heaps, and hence the prevalent opinion that a military school is a success, while a school of agriculture must be a failure. The fact is, that wherever there has been a failure, it has either been owing to the want of adequate means, or to the inability and incompetency of the managers. Few institutions of the kind have as yet had the time and means necessary to do all that is required of them by public opinion. Not one has been in existence long enough to test its full usefulness, if we except that of Grignon in France, and Hohenheim in Wurtemberg, each of which are aided by their respective governments. The Agronomic Institute of Grignon has been one of the chief means of attracting attention to the necessity and economy of educating a large portion of the people in a better and more improved practice than that which was to be obtained from the tuition and traditional experience of the preceding generation.

A correct reading of the latest census, returns ought to instruct any member of Congress that there is a public necessity for better opportunities of gaining knowledge connected with agricultural pursuits. The people of the several states, north and south, east and west, recognize this necessity, and hence the movement in favor of education in agriculture is very general, and the proceedings of the institutions already commenced are watched with an earnest interest.

Perhaps no more illustrative example can be cited than that which the state census of New-York affords. It is claimed to have been taken with more than ordinary exactness, and its statistics are deemed reliable. This state, with her great and successful agricultural society in full operation since 1839, with a large and intelligent rural population, with her district schools, her academies, and her colleges amply endowed and sustained, with all the advantages conferred by her numerous canals and railroads, with the best markets of the world easier reached by her products than by those of any other state, with prices such as the world has never known before, with an increase in every other element of wealth, and with a capital invested in farms larger by two hundred and twenty-five million of dollars than it was in 1845—has not only actually decreased materially in her principal agricultural productions, but in not one has she kept up with the increase of her population and of the invested capital. In wheat she has fallen off 4½ millions of bushels, whilst her average per acre has

sunk from a production of 13 to 11 bushels in the ten years. Potatoes are not only $8\frac{1}{2}$ millions of bushels less in quantity, but instead of 106 bushels to each acre, the average is now but 71. Corn is grown in greater quantity, but instead of even the light average of 1845, which was 26 bushels, it has sunk to 21. In 1855 there were not so many swine kept as there were in 1845, by over half a million. The number of neat cattle of all kinds is not larger than it was ten years ago; while the decrease in sheep for the same time reaches to the enormous number of 3,226,841, the wool clip of 1855, as a consequence falling short of 1845, by over four millions and a half of pounds. All this was going on whilst Great Britain was increasing her average production of wheat alone nearly one-fourth, and other agricultural productions in proportion! and the whole civilized world was stimulated by its necessities to give every needful encouragement to agriculture.

Do not these facts indicate to members of congress with an unerring certainty the gradual exhaustion of the native fertility of the land by the processes of cultivation put in operation by ignorance? It is a continuance of the system that was practised in Great Britain up to 1800, and which prevails over the greater part of Europe to this day—a system which seems to promulgate that all the world may advance but the agriculturist shall stand still. If the great and energetic state of New-York, shows the above as the results of ten years under this system—and these ten years of such invention and advantages in improved machinery and implements as no age has witnessed, what may be expected would be shown by like returns from other states, which enjoy but few of her eminent advantages, and have less general intelligence in their rural population!

Is it not evident that the gradual exhaustion of the soil is a great national loss, and that if the appropriation of a few acres of the public domain will lay the foundation in the several states of a check to this drain upon the soil, and thus increase the general wealth, that it is the duty of Congress to make the appropriation provided for in the bill introduced by Mr. Morell?

The demand for knowledge in all the sciences which have a bearing upon agriculture, with their application to its practice, is increasing, and institutions designed to furnish such knowledge, must be both permanently and liberally endowed, if they are to be of immediate and general utility. We do not believe in calling upon "Hercules without putting our own shoulders to the wheel;" but when states have shown that they are willing to tax themselves for a liberal share, they may with propriety look to the general government for aid to endow in perpetuity institutions which will certainly promote the prosperity and the public defence more than any military institution possibly can, and which

will unquestionably give increased value to the public lands.

Institutions like those of New-York and Michigan, were they prepared with all the necessary buildings, and a full corps of professors who were experienced in their several departments, at the present time, would each be filled with more than five hundred students; and in fact at the present term the applications for admission to that of this state were so numerous that much the larger portion were refused. The means within the command of these institutions, or which are likely to be placed within their reach, by their several states, will possibly enable them to live along for years doing but one-tenth the service of which they might be capable; in the meanwhile the want of instruction by the growing generation is immediate.

Four years ago, in an address delivered at Marshall, we recommended that a small percentage of the swamp lands should be set aside as a means of forming a permanent fund to endow the institution which was to be depended upon for this kind of instruction, and thus save it from being an annual drag on the tax list, for its yearly expenses, but this was considered too local a mode of using any portion of that immense fund. We said then, that with *economy*, with 1000 acres of land, \$50 000 for buildings, and an annual revenue of from \$12 000 to 15,000 an institution ought to be maintained which would serve Michigan for some years. We believe that the investments in land and buildings have been somewhat more than this, but as no report has yet been made on the subject, we, like the rest of the state, have so far only rumors to depend on, and we prefer total darkness to that kind of light. We have however, an institution that has spent a year in preparatory organization: shall it be perfected? and shall it and others like it be developed to their full capacity within a reasonable time, or shall they be left to their own resources until another generation is warned by a still greater deterioration in future decades than that which we have pointed out as occurring in the Empire State?

If tuition is to be free, the cost of that tuition must come from some source, and why not from that which will receive the greatest benefits, namely the public lands. If the amount named in the bill seems too large, reduce it, but let legislators bear in mind that whatever they may decide upon, the present and the future of agriculture and its improvement by means of education, are subjects worthy of their most profound attention and of the utmost liberality on the part of government. In the older states, whose population and lands most need the benefits of instruction of this kind, no state will have an advantage over the other, unless it may be in the readiness with which each may avail itself of the grant; for what has been shown to exist in New-

York, will be found in a still greater degree in Virginia, Massachusetts, the Carolinas, Pennsylvania, Kentucky, Ohio, and others we might name: all, and especially those states whose productions are the most varied from having the benefits of a warm climate with temperate winters, will reap ever increasing benefits from the infusion of some of the sap of the tree of knowledge into their agricultural systems. We say, let the bill pass.

Some Notes About Herefords and Shorthorns.

BY F. J. FLANAGAN, LEXINGTON, KY.

The following letter, containing some important statements relative to the economy of Shorthorns and Herefords, we think will be read with much interest. Mr. Sotham, the celebrated Hereford breeder, sent it to us last month but we had not room for it then. The experience therein given is worth making a note of, especially as Mr. Flanagan gives authorities which he cites in support of what he states. The introduction of the Hereford race of cattle into the United States, has been contested inch by inch, and the record of the attempts to get them tested for the past eighteen years, is that of a constant struggle, against the popular sentiment in favor of the more fashionable and lordly Shorthorns, which have been the first to improve the stock of the United States, and which have in the climate and soil best adapted to their wants, actually done better in many places than in their native habitat. In placing before our readers the qualities of the two breeds, we do not wish to be understood as depreciating the merits of the Shorthorns; but they have laid the field to themselves, almost for the whole period during which attempts have been made to improve the stock of the United States. It is well known they are not perfection, though in many instances they have been brought more nearly to it than any. In size, massiveness and beauty combined they cannot be approached. In other qualities, such as hardness, strength of constitution, economy of feed, quality of beef, the Herefords and the Devons are superior. But the main question to be tested, is, which is the best for the farmers of Michigan?

WM. H. SOTHAM, ESQ., N. Y.

Dear Sir:—This morning's mail brought to me your welcome favor of the 21st inst. I read with interest your two valuable communications to the *Country Gentleman*, every word of which, so far as my experience goes, I entirely coincide with; there are some relative comparisons respecting particular animals, that of course I cannot speak to, not having seen the animals, but as to the relative value of the two breeds of cattle, the Herefords and the Shorthorns, I made up my mind respecting them some forty years ago, very much in favor of the former, either

for fattening or for the dairy. The Shorthorn will fatten equally well with the Hereford, but when brought on the stall, the latter is fully worth one cent a pound more than the former. You are, I presume, aware that a majority of the best butchers of London will not buy a Shorthorn if they can get a Hereford in like condition, for the two following reasons which are hardly known outside the trade. Mr. Jones the great tanner at Greenwich who buys more hides than any man in the London market, (his sons now carry on the business) has often told me that he would always give a cent a pound more for a hide off a Hereford steer or heifer, than for the same weight off a Shorthorn; the former being thicker, more firm, and as he termed it, "close", in contradistinction to porous, and the leather when finished retaining the same superior qualities.

The Shorthorn hides he considered, flimsy, flabby and loose, and particularly bad about the belly and flanks, running very thin from the point of the ribs down; hence his preference for the Hereford hides. The opinion of such a man, whose family for generations, and himself for a long life, have been engaged in the one business, must not be lightly rejected on any point connected with it. Many a time have I dined with the late Mr. Mellish, (England's best judge of fat cattle, who managed and bought the live stock in Smithfield market for the British Government for forty years,) in company with Mr. Jones, and talked these matters over and over again, and we all concurred in the opinion that the Herefords were the superior of the two breeds, for general farm purposes, by a long odds.

The other fact, a very curious one, I am indebted to Mr. Mellish for, (I was his assistant for eighteen months at Deptford,) it is this: there is a famous and long established rendering house in Paternoster Row at the back of St. Pauls in London, to which the Government fat was sent to be rendered; whenever the fat from Hereford cattle and very many of the commoner breeds was sent there, this renderer, I forget his name, although the house is still in existence, would return 85 rendered, for every 100 pounds, of the rough fat that would be delivered; but he seldom could return more than 80 to the 100 pounds of the rough of the Shorthorns, making a difference in the fat, in favor of the Herefords of five per cent. The foreman of the establishment often told me that this fact held good with the butcher's fat, whenever the distinctive breeds of the two were ascertained. The people of this country, in my opinion are not far enough advanced in the knowledge of stock to receive and appreciate these nice but important distinctions, the result of years upon years of experience by England's best and oldest tradesmen. We cannot from any one man gain all true knowledge respecting the good and bad qualities of any animal, it is from the many and the observant, engaged in

using and consuming the various parts. Have you ever been in the London tripe market? If you were, you find the tripe of all the other breeds preferred to those of the Shorthorns, they being thinner, with less substance and flavor than any of the others; experience has taught those people even this *apparently* unimportant fact; but in reality an important one, showing the more delicate nature or quality of the bowels of one beyond the others, and hence the greater liability to disease of the Shorthorn beyond all others, the Herefords included. I am not aware that your attention was drawn to these facts before, as a portion of the distinctive qualities of the two breeds; if not, keep them in memory, compare and judge for yourself. It is now thirty-five years ago since I heard the late Mr. Knight of England, the renowned horticulturist and agriculturist, say at an agricultural meeting in the city of Hereford, that he had never seen a Shorthorn of any age take a premium where he had any competitor to contend with, that the Shorthorn was not *insolvent* at the time the premium was awarded. This was a startling assertion for a farmer to hear from such such unquestionable authority as Mr. Knight. Subsequent experience and observation has taught me and others, the truth of that great man's assertion. Although I might add other facts in proof of the preference of the Herefords over the Shorthorns, especially in the dairy and the raising of their offspring, yet I have said enough in support of my opinion for one day and for one letter.

I am at this time engaged in writing a work on the killing, curing, and preserving of provisions, which occupies all my spare time, and will prevent me writing a special article on the subject, but you are at liberty to make such use of my remarks as you see proper.

I will add one more fact derived from some statistical remarks on the two breeds, to be found in a periodical called "*The Plough*," published some years ago in England: namely, that three Durhams die or lose their calves in the act of calving, for the two Herefords, and that the disease called the Murrain is but little known amongst the Herefords, while it is a prevalent disease amongst the Shorthorns,—a good proof of the justness of the remarks of the Tripe dealers.

Our soil in the surrounding counties here is a very rich clay mixed with fine gravel, all laying on a lime stone rock, some of the clay is of a reddish color which many prefer, the rest a very dark color indicating great richness; all most admirably adapted to the production of the grasses, but more particularly the blue grass and clover. I have never seen land preferable to it for grazing purposes in any country in the world except Ireland, and the superiority of their land is not derived from nature, but from their position, the climate is so much more equable and hu-

mid, deriving also the benefit at all seasons of the saline exhalations from the sea by which it is entirely surrounded, no part of the Island being more than fifty miles from the coast; the age of the grass pastures of Ireland makes them far superior to those of any other country, imparting nutrition and fat in a greater degree than the young and artificial pastures of this region. No pasture can be truly good and possess high fattening qualities without age; I set it at thirty years the very least.

Large and Small Seed Potatoes.

Last autumn, while in Jackson county, we called at the residence of Mr. Aaron Reynolds in the town of Spring Arbor, when he informed us of his experiments in raising potatoes, and that he would send us the results, which he had written out. This article would have been received last month, but for the death of his brother, Grindall Reynolds, a very successful farmer and an old friend of the MICHIGAN FARMER, and whose decease from consumption, we very much regret.

It will be seen that the experiments of Mr. Reynolds extended over a period of three years, in which the seasons were far from propitious for the growth of potatoes.

BALDWIN'S MILLS, MARCH 16th, 1858.

ED. FARMER:— Hoping to remember my promise to send you the account of my experiment in growing small potatoes I herein enclose the account just as I wrote it out nearly two years ago. You can make what use you please of it. I lay no claim to having it published. The experiment was but with one variety and that an old one. To be of much use it should have been with several varieties. So far as my experience goes, aside from this one experiment, I have planted small potatoes but three or four times for a field crop, and in every instance getting as good a crop as where I planted large ones. I am however still in favor of planting the best sized potatoes I can get. I have for over thirty years raised potatoes to sell, but in all that time I have never known a successful potato grower who followed planting small ones. In fact I have always found it to be the case that the man who followed the practice of planting small ones, always had his potatoes to buy.

AARON REYNOLDS.

SPRING ARBOR, DEC., 29th, 1856.

In the last number of the FARMER "Ex. Bookseller," among other questions asks the following, "Is it as well to plant small potatoes as large ones? Is it best to cut them or plant whole?"

Three years ago I began the experiment of planting small ones to satisfy myself about this matter. Planted six small ones weighing one and a half ounces each in six hills also six large ones, weighing twelve ounces each, and planted them in six hills, also

three large ones weighing twelve ounces each, cut them into four pieces each, and planted six hills two pieces in a hill. They were planted in three rows, side by side, on ground exactly alike, each kind making a row. The first and last season (1854 and 1856) were the driest seasons I ever knew. The middle one (1855) was about the wettest, but the potatoes were well taken care of and all fared alike. They yielded as follows :

1854 small ones produced in number 80 weighing 12 lbs.	
1855 " " " 132 " 81½ lbs.	
1856 " " " 120 " 15½ lbs.	
1854 large ones produced in number 147 weighing 16½ lbs.	
1855 " " " 165 " 34½ lbs.	
1856 " " " 175 " 19½ lbs.	
1854 cut ones produced in number 182 weighing 18½ lbs.	
1855 " " " 146 " 28½ lbs.	
1856 " " " 166 " 18½ lbs.	

The seed planted each succeeding year was taken from the produce of the year before, small ones from the produce of small ones, &c. The variety planted was Long Pink Eye. The produce of the small ones is very uniform almost every one being fit for cooking. Next best the cut ones.

A. REYNOLDS.

PLANTING POTATOES.

As early potato planting time will be a'ong soon, I will state for the benefit of those interested, that so far as I know or have heard, there was no case of the crop being injured materially by the rot where planted very early and well hilled up, either by the plow or hoe.

One of my neighbors lost almost his entire crop, planted about the first of June, and cultivated so as to leave the ground flat ; the ground was clover sod. Another planted on same kind of ground early, cultivated with a shovel plow, and none rotted except an occasional hill where not well hilled up. Mine were planted on wheat stubble, part of the ground heavily manured, planted in April, used both cultivator and shovel plow ; the rows were so close one way that one furrow of shovel plow in a row covered nearly all of the ground ; by going through the narrow way last with shovel plow it left the hills in the ridge ; the hoe not used at all ; got a fair crop, and no signs of rot except an occasional hill where we turned at the south end near the fence, but in all not a half bushel on two acres. Will those who have observed anything of the kind in other places, or the reverse, communicate to the FARMER for the benefit of a

TYRO.

Grand Traverse Country.

MR. EDITOR :—Having heard many inquiries about the country around Grand Traverse Bay, I propose to give you a little of my experience in farming here. I moved from Battle Creek, Calhoun Co., to this place in the spring of 1855, having been a resident of that town for ten years. I bought 240 acres of land here very heavy timbered with beech, maple, basswood,

elm and black and white ash, and the soil a black, sandy loam, from one to three feet deep, with a clay subsoil. The sugar orchards here are the best that I ever saw. I made over eight hundred pounds of sugar on my farm last spring. I have now forty acres chopped, which I have mostly jam-piled, as I think that the best and cheapest way to get rid of the timber. I raised nine acres of wheat last year, but did not give it a fair chance, as it was not sown until past the middle of October, and a part of it not until November. It is now threshed, and I find that I got over sixteen bushels to the acre. Of buckwheat I got thirty-nine bushels per acre. Of oats I had three acres, which grew so large that they lodged, and did not all fill, but the yield was from thirty to forty bushels per acre. I had not time to clear off my corn ground, and so planted corn among the logs ; I had nine acres which gave at the rate of thirty bushels to the acre, and one acre of potatoes which yielded three hundred bushels. I have raised various kinds of vegetables, all of which have done remarkably well. Last fall I sowed fourteen acres of wheat, plowed my ground and got it all in, in September. It looks as well as any that I have ever seen growing in the south part of the State. My neighbor, J. Sours, raised twenty-five bushels of spring wheat per acre, last year. I think this promises to be one of the best wheat growing counties in the State.

We have had a very open winter the past season. The snow has not been over four inches deep at any one time, and through the month of January I worked at logging for spring crops. I think my wheat will yield double the amount next season that it did last, it being better got in, and in better season.

Grand Traverse holds out as many inducements for those who desire a home in the woods as any other new country. The best of land can be had at \$1.25 per acre, and a healthier country there is not in the world. On account of its high latitude, people are apt to imagine that the cold and frosts will be so severe and long-continued as to render farming impracticable ; but it is not so, as those who have emigrated here from more southern counties can testify. This is probably mostly owing to our being so much surrounded by water, as the Grand Traverse country is nearly all in peninsulas of from fifteen to twenty miles long, and from one to five miles wide. Our most freezing winds come over lake Michigan whose waters are seldom at a lower temperature than 32 deg., Fahrenheit, and necessarily modify the wind in its passage of eighty or one hundred miles over them. Again, it is known that the temperature of the atmosphere diminishes about a degree for every three hundred feet of elevation, and we, being in the vicinity of these large bodies of water, must be several hundred feet lower than places one hundred miles away from them. Many people are apt to confound the terms "cold" and

"frost" as synonymous, while in reality there is a distinct difference. The aggregate coldness of one country may be much greater than that of another, and still, other circumstances being different, not be near so subject to frost. A serene atmosphere and a clear night sky are favorable to frosts, from which we are more protected by the vapory condition of our atmosphere, arising from the great lakes around us.

Altogether, I think this promises to be as good a country for raising all kinds of produce as any in the State. We have had a wagon road laid out and surveyed by our enterprising inhabitants, Mr. Noble and others, from Elk Rapids to the forks of the Muskegon, with the prospect of its soon being opened. The survey is just completed.

Yours respectfully,

R. JOHNSON.

Grand Traverse, March, 1859.

Sheep Washing

The following taken from the *Ohio Farmer* explains in a practical manner, why sheep should be washed, and why shelter should be afforded them from long continued rain storms:

The "philosophy" of a thing is the reason why it is so. One who understands why a thing is so, will be likely to do the work connected with it better than if he were ignorant of its theory. Now in regard to washing sheep, many persons doubtless suppose that the water acts simply to dissolve the dirt in the fleece and by its *mechanical* action to separate it from the fibre. This, it does to be sure, and this would be a sufficient reason for washing the sheep, if the water did nothing else. But this is really the smallest part of what good sheep-washing does. You have perhaps noticed, on the finer woolled sheep especially, a yellow exudation near the skin. You will see it nearly *all over* good sheep, but most on the breast and shoulders. Now this is a secretion from the glands of the skin, and serves, it is supposed, an important purpose in refining the fibre, and in protecting the animal. But the fact about it which has most to do with sheep-washing is the following:—This yellow gum called "Yolk," from its resemblance to the yolk of an egg, is largely composed of potash and oil. It is, in short, a sort of naturally formed soap, which, when the sheep is plunged into the water, is dissolved, and acts as a powerful cleanser of the whole fleece. It is as if fine soap had been intimately mixed with it down to the very skin, just before washing the sheep. The owner of sheep who keeps this fact in mind, will see the importance of several things, which we will mention. 1. He will do well to wet the sheep and let them stand a little while before he washes them thoroughly. This will allow the soap of the yolk to act freely. 2. If he can wash his sheep in clear soft water, this will be better than hard water. 3. He will find it good, for this, as well as for other reasons to wait till the weather and water are mild, for the soap acts better thus than if the water is very cold. 4. He will see the importance of sheltering the flock from long and severe rains. These dissolve the yolk, and lower the quality of the wool, besides chilling and weakening the sheep themselves.

Corn and Potatoes.

There are two crops to which the attention of the agriculturist must revert during the month of May. The first is corn, and the second is potatoes.

These two crops need not only a rich soil, but it should be deep and well worked previous to being planted. Where corn is so much of a reliance for the pork, the beef, and even the bread and milk raised on the farm, no pains should be spared in a proper preparation of the ground for the seed.

Nearly every one of the best cultivators of corn agree in admitting that where the largest yield of corn is obtained, the land must be plowed in the fall. Especially is this the case where the field is an old sod, and the under soil has not had the benefit of atmospheric action for some years. But as there are many cases where the plowing up of sod must be done in the spring, it is important that this plowing should be done in the best manner, and that after it is done, the top soil should be rendered as perfect a seed bed as may be, then there will be some chance not only for a good crop, but also for a saving of labor.

After a field is plowed in the spring, it will be noticed that the soil turned up is light in color, cold in temperature, sodden and clammy in texture, and inert in quality. To plant seed in it while in that state, is to lose time and labor, and the expected crop. A sod turned up in this state, should be let lie as long as possible without being planted, and in the meanwhile its surface should be worked with the cultivator, and the harrow, two or three times after it is plowed. When it inclines to be lumpy or full of clods, a heavy roller passed over before the second cultivation will crush much of the cloddy masses, and render them serviceable soil. After ten or fifteen days exposure to the atmosphere, with a constant working of the surface, it will be found that the cold, grey, dead mass which the plow had turned up, has become somewhat warmer in temperature, has lost its sodden character, and is light and springy under the foot. Had the bulb of a thermometer been put an inch in the soil when first turned up, it would have been found that the mercury had sunk some degrees below what it stood at in the open air. But let the bulb be sunk to an equal depth, after the soil has been worked, and thoroughly exposed to atmospheric action, and it will be found that the mercury will rise considerably. *Without* heat there can be no growth, and hence it is better to delay the planting of corn for a week or ten days, and to have the soil in which the seed is placed in a condition to promote a rapid and healthy growth, than to hurry it in before the soil is ready for it. Corn if put in a warm rich soil will come up in five days, and continue to advance perceptibly; whereas if put into soil only half worked, or badly

prepared, it will come up slowly, and after some growth, will apparently remain stationary for a considerable period, during which it is losing a portion of the season most advantageous to it.

Another reason why we should endeavor to till ground well before the seed is sown, and also mix the top soil with manure, is that it helps to warm the soil by darkening its color. A dark colored soil is always of a higher temperature than one that is light colored. SIR HUMPHREY DAVY found that a rich black mold exposed to sunshine at a temperature of 65 degrees, in an hour had increased its temperature to 88 degrees, whilst a light colored chalk soil was heated to only 69 degrees under the same circumstances. SCHUBLER, a German experimenter, found that a yellowish loamy clay, which had a temperature of 112° when exposed to the sun, in a dry state, when covered with a sifting of fine magnesia, so that it had a white surface, had a temperature of only 108°; but when the same soil was covered with a fine dusting of lamp black, the temperature rose to 121 deg., showing how materially color affected the soil, and it is here cited to show how much the growth of plants may be promoted by operations of surface manuring, which has a tendency to darken the color of the soil.

Thorough cultivation previous to planting saves labor and at least one hoeing. Every grower of corn will have observed that where a piece of somewhat stiff sod is turned over, and corn is planted on it immediately, that in a short time there is a crust formed on the surface. This crust is air tight, and prevents the growth of the roots, for they need air just as much as a fish does who never comes to the surface to breathe. With a rich black friable surface, this crust does not form so strong, nor so firmly as on one that is only half worked. It is a common saying that the soil must be loosened round the corn as soon as the rows can be seen. Yet in garden cultivation, where corn is grown upon soil possessing the necessary requisites to promote its rapid and early growth, this early hoeing is not deemed so needful as in field culture. We therefore say, put your planting off till you are sure that your land is in a condition to make your corn grow twelve inches in twelve days after it appears above ground.

When the ground is ready, the marking and planting should be done with the utmost rapidity. The plan adopted by Mr. S. G. Pattison of Marengo, is well calculated to facilitate this work. He plows in the fall and sweeps over the surface of his field in the spring with that admirable implement, the gang plow, harrows smooth, and then puts in his team with a broad marker, and follows it with a gang of hands, himself leading, which plants his whole field of eighteen or twenty acres in a day. He then uses the two horse wheel cultivator with the teeth arranged to plow the earth from the rows, as soon

as the corn is up high enough. The hoeing is thus done as rapidly as the planting, and with little manual labor. There is no plowing first up one side and down another, but the cultivator and the horses do it *nearly* all. But then his soil is admirably adapted by its quality for this treatment.

Among the improvements of the age there have recently appeared several hand corn planters, which are calculated to make more exact and easier work of corn planting. Some of them, such as Wake-man's which plants two rows at once, would seem to work well. But we incline to think that after a fair forenoon's work with one, there are few who would not be willing to change work for the rest of the day. Of the horse planters, we do not now hear anything said, and we perceive that most of them are out of the market, for they are not advertised.

It is necessary to remind our readers, how important it is that they should be particular as to the kind of seed which they should select this year. Last year was evidently too short a season for the large varieties of the Dent, which only matured in a few localities. The Red Blaize, where we have seen it growing, seems to give a fair yield, a large sound ear, and good growth of stalk. The King Philip or Brown corn, is a small eared, early ripening variety, prolific, having frequently more than one ear on the stalk, but the stalk is small, light and inferior in the amount of crop.

The same treatment that prepares a field for corn, will prepare it admirably for potatoes, except that the furrows must be made with the plow instead of the marker. There is no implement which is more useful in preparing ground for potatoes than the gang plow. If the field is well plowed in the first place, the gang plow leaves a bed both deep and mellow in which the potatoes can set to advantage, and when they are molded up, it will be with a loose covering of well pulverized soil, and not with a mass of grassy sods, from which will spring a crop of fall weeds, that leave nothing but few potatoes in the hills, and very small samples withall. In relation to seed we must say, that it is probably the most difficult of all plants to get new and good varieties generally introduced of all the crops grown, except wheat. Every cultivator knows, that a white flecked mealy tuber is what is wanted, of good medium size, and sound in the core. Yet instead, the sets are poisoned with small, yellow fleshed, soapy, clammy varieties, that are not fit to be hogs, if anything else were attainable in time to save them from starvation. From what we have seen of the Siberian variety, grown by D. D. Tooker of Napoleon, Jackson county, we are in hopes that it will become thoroughly introduced. If he can make it take the place of the inferior varieties now so prevalent, he may be considered a real benefactor of the race.

An Englishman in the Woods of Genesee.

MR. EDITOR :—While writing to send in my subscription, I feel inclined to give you a little description of this part of the country, and also to let you know how an Englishman can get along in the woods. You must know that I left England (ten miles from London and forty from Southampton) in the year 1850. I came to Genesee county in this state, not knowing a person here. I spent almost all I had to get to Michigan, with my four children, the youngest a boy ten years old. I rented a farm in Flint from a person in Detroit, but soon found that my landlord was a land shark waiting to catch what escaped the sea; I paid him two hundred dollars and left his place. I thought I would get a place of my own, but reading in the FARMER something like this, that "Englishmen went into the woods rich, and came out with nothing, while Yankees go in with an axe and a grindstone, and come out rich," I felt rather discouraged. I took a farm for three years, with privilege of leasing it as much longer as I wished. At the end of three years and ten months I received notice to leave. I then bought in the centre of this town, Mount Morris, and had to cut through the brush three miles to get to my home. This was in April, 1856. To day we have but one mile of standing timber between Flushing and Genesee. Mount Morris is quite a new town, having been set off from the two towns of Flushing and Genesee about four years since; it is now improving and settling fast. It is three miles from Flushing village, and on the east line is the plank road to Saginaw. Seven families have settled on this east and west road within two years, and more are coming in.

This is a flat country, but has plenty of fall when cleared and ditched. The land itself is of various kinds, mostly a rich hazel soil, with very strong, rich, clay bottom, or subsoil. As I am an Englishman, you think, of course I know the benefit of ditching; but I must tell you that since I have been in Mount Morris I have learned more on that subject than I could have believed. Last summer a part of my logs to the west of my house were under water; in the fall I traced out the fall of the land by beginning with a hoe, and working a furrow until I came to my west corner. I found more fall as I dug to the east, and kept my ditch as deep as the water would run off. It has taken all the water from my lot ten rods from the ditch. I believe we had better have twenty acres well ditched, than forty in its natural state.

As I told you, I felt a little discouraged about coming into the woods, but you will think I took the hint, and brought my grindstone and axe along. I went to work in earnest, put in four acres of wheat, built a small framed house, 25 by 28 feet, and in the winter myself and boy chopped for a clearing. Last

spring we found that our two axes had chopped 25 acres in one year. We cleared some in the summer, put in nine acres of wheat, seeded some for team, began an orchard with forty-six apple trees, and let my son go to school. I have twenty acres to burn this summer, and have begun preparations for oats, corn and potatoes.

I have a great liking for things in the garden. I think there is no finer sight than a yard and a garden full of flowers and shrubs. I have got these around me already. It looks strange to Yankees to see such a flower garden in the midst of the woods; but I love to see them, either on my own place or on others. Yours truly,

W. HOTSTON.

Mount Morris, Mich. April, 1858

[It will be seen by the experience related above that there is nothing discouraging in our Michigan woods, when entered with a grindstone and axe, and energy to turn the one and skill in swinging the other. The observation noticed by our correspondent was made before the FARMER came into our hands, and though partially correct, is not historically true, for the men that stepped into the woods from Plymouth Rock, with little else but "axe and grindstone," were all Englishmen; and they found there was much to be learned. We are pleased to know the taste for rural ornament still lives in spite of the hardships incident to the settlement of a new country.—Ed.]

Millet for food—Monthly Clover.

MR. EDITOR :—I have seen many articles in the papers on the subject of raising millet, and would herewith give something of my knowledge concerning its use and value, as I have been acquainted with it in Germany, and know how it is used there. Here no one seems to think of raising millet except for fodder, but in Germany it is never raised for fodder at all, but for the seed, which is cooked as an article of food. It is first hulled by a small machine with two iron rollers, one of which is turned by a crank, and the seed falls into a box like a chess box in a fanning mill. After the hull is cracked, and the hull and chaff separated from it, the grain is boiled in milk, like rice. I prefer it to rice for puddings. It requires but a small quantity, as it swells or thickens up exceedingly. It is often used to put in soups, but is not so good for that as for puddings. When eaten, butter should be used with it as with rice.

Millet should be sown on highly cultivated land, clear of weeds; sow about three quarts to the acre. To secure a good crop, the land must be rich, and the seed sown very even, so that each stalk may stand by itself, and grow as thick as a man's little finger, and six feet high. This is when it is raised for family use. From sixty to eighty dollars worth might thus be raised from a small piece of land. I know a farmer once who realized twenty-four florins from

an eighth of an acre. Comparing its value here and there, we may say half that number of dollars from the same quantity might be reasonably expected in an excellent season. But it is a crop that often fails. There grows in Germany a kind of blue clover, called the monthly clover, because almost within a month it grows two feet high. It is much better than hay. I often wonder why it is not introduced into this country as it could be easily done through the Patent Office and our minister, and would be a valuable acquisition. Yours, J. G. MILLER.
Hilldale, April, 1858.

Our Note Book—Oakland County.

More about Horses.—A cheap barn.—John O'Gaunt.

Last fall S. D. Brown, of Farmington, brought down to the state fair his stable of colts, and his Morgan horses. He was the only exhibitor who was at the expense of competing for the premium offered by the Society for the best five colts from one horse. The decision of the committee was adverse, on the ground that the stock was not worthy. Mr. Brown considers this decision is not a just one: first, because his colts, were as good, in the main, as are generally to be found amongst farmers, and probably a little superior; second, there being no standard set by the Society, the committee did wrong to deny him the advantage he had gained at much expense over all other breeders, of being the only person who added to the interest of the fair by showing so many colts of one family. It must be allowed that there is something in these objections, and in these times, when there is so much discussion as to what are the best qualities of the horse for this state, it might be well when reading off stock as not worthy, to define what makes colts worthy.

While in Farmington we visited the stables of Mr. Brown, which are fitted up in a neat manner, and saw his stock, among which was a very delicate and beautiful brood mare, chestnut in color, and nearly thoroughbred. His Morgan horse is one brought into Oakland county some years ago, and is one of the handsome, genteel class, which charms the eyes of outsiders, by their neat, rather stylish, and somewhat elegant appearance, when in full flesh, but which never ought to be kept for stallions. This class of Morgans is, deficient in several points. They lack individual character and force; they do not have power, substance or size: they do not show extraordinary speed, but generally a fair action, and their muscular system is light. They look pretty when in full flesh, but when worked down lose their attractive appearance; hence we seldom see a pair of really valuable well worked geldings shown from such horses. What has become of the innumerable colts which these horses must have got in this state for the past five years? They have had the best mares in the state, have they raised one stallion that

the horsemen of Michigan are proud of as a state production at this day? Do we not, at the present time, have to depend altogether upon other states for breeding stock? With such large sums paid for Morgans and Black Hawks for the past five years, we ought to be able to supply some of our neighbors with mares and stallions at prices that would bring back some of the money that has gone out from us. The fact is that most of the breeders have gone into the business on the strength of their fancy, and not upon their knowledge of the practice of breeding, or of the qualities of the animal they had become interested in. There were a number of these kind of horses shown at the state fair last fall, and also at the county fairs. They have in general a kind, tractable disposition, and make good pets; but unless crossed on extraordinary good mares, their progeny show little superiority, and there seems to be a want of vigor, which prevents them from improving the stock of the community.

Mr. Brown has, like most of the farmers in this part of the county, quite a passion for raising horses, but with the pains he takes, the care he gives his stock, and the capital invested, he ought to raise a class of colts, that would remunerate him better, and which would not permit any committee to decide them unworthy to compete; and so he would, if he could get rid of his fancy, and exercised his judgment to improve in either speed, blood or size, or all three combined. Last month we spoke of a Morgan horse owned by A. N. Kimmiss of Lyon, which is a horse of a different class from that of Mr. Brown, and the two give a good idea of two kinds of Morgans. The Kimmiss horse is of the type of true Morgan, low set, but with much substance and power, with marked characteristics, which, though coarse, may be used for improvement. Mr. Brown's horse is higher, more elegant, finer in limb, head and body, with a light, graceful action and carriage, and as a family horse, would be taken by any business man at double the price which the other would bring. But for breeding purposes there is a wide difference, the Kimmiss horse being able to produce just such horses as the Brown horse, if used with the right kind of mares, whilst the latter would be uncertain in the quality of his stock from any quality of mare.

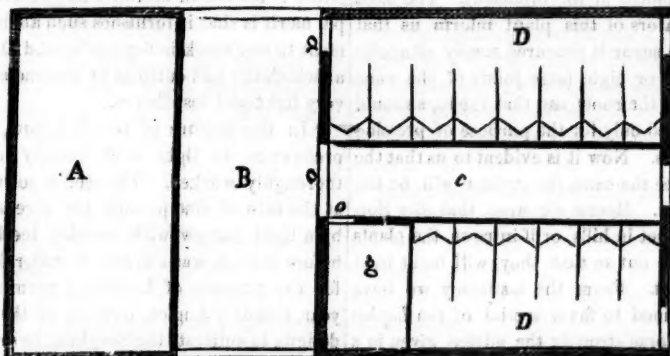
Mr. Brown also had a fine well formed Spanish Merino buck, whose wool was of excellent quality, though we perceived he had rather more than one year's growth on. We also noted a couple of very good bucks of the same breed in the barn of Mr. Sprague. One of these, though not so fine woolled as the other, was evidently the best ram to breed from, being bold-eyed, square built, round carcased, broad loined, and large without being leggy. The other had a finer and more oily fleece, and we were told was the general preference, although he was not near so good a sheep to breed from so far as con-

formation went, giving evidence of a more tender constitution.

Mr. Joseph Elder, of Lyon, is giving some attention to the breeding of French Merinos. He had some twenty young bucks, some of which were very choice, but the others should be weeded out. We know it is usual to keep an assortment of animals to meet the capacities of different men's pockets, but in this way improvement is long delayed, and generations of animals are more frequently raised from the inferior than from the best, because the first cost is a little less.

Our friend Gregory, the Jackson Hippomach, we found preparing for an active campaign. He has a stable of most promising colts. The Island Jackson colt has improved vastly during the past winter; he fills out well, is of good size, and shows a fair turn of speed, with a true trotting gait. His condi-

tion at his present age is creditable to Gregory's training. We have also seen, during the present season, the Abdallah Roebuck, a competitor, that is also promising to become somewhat noted as a Michigan production. He looks well and is almost entirely recovered from a cut which he got while being trained to harness. He has much of the same depth of chest and well developed shoulder as the late Abdallah Chief, with rather more loin and quarter. Hambletonian was in excellent order: some of his colts must soon begin to manifest of what stuff they are made, as he has now been nearly four years in the state. Wild Dayrell, the Kemble Jackson colt, has filled out well, and is in eminently good condition. Two years more of such improvement and proportionate growth, as he has made for the past two, and he will be a large, stylish, fast horse, not quite a model in every particular, but calculated to do good



Plan of a barn erected by A. S. Brooks of Novi, Oakland county.

service to the state, being of that remarkable stock which has long been noted as natural and fast trotters.

At Novi we found our friend Woodman with a large increase of stock on hand, his brood sow, that we mentioned a year ago in the *FARMER*, having a large, healthy litter, and maintaining her reputation as one of the best in the district. This sow crossed on an Essex, would be apt to bring pigs of good size hard to beat for early maturity and fattening quality combined, and we think it would pay to drive her down to J. S. Tibbit's farm in Livonia and cross with Hanno. The pigs from such a cross would be worth two dollars a head more than a common litter, either to sell at two months old for breeding purposes, or to keep for fattening.

We saw at the farm of A. S. Brooks of Novi, his young bull John O' Gaunt; he was coming forward as a young animal showing remarkably good points for his age, size large, with a deep, long body, and of excellent quality as a handler.

Mr. Brooks gave us, when at his house, the cost of a stock barn which he had recently built, which may prove somewhat instructive to those putting one up.

We consider it a cheap structure. The length of this building is 56 feet, and its width 30 feet, with posts 16 feet high. There is in one end a bay, *a*, 14 feet in width; the floor *b*, is 12 feet wide, with doors *o*, *o*, of the same width. In the other end are ranges of stalls four feet wide, *d*, *d*, and eight feet high. In one corner is a granary, *g*, for keeping feed. Over the stalls is another bay. The passage in front of the stalls, and which separates them, *c*, is six feet wide, leaving the stalls 12 feet in length, so that there is ample room to go behind each animal. Each stall has a well finished box manger, and the cattle are fastened by the head with a rope fastening. In the end of the barn are three doors, *o*, *o*, *o*, one opening into the passage from the yard, and the others to admit of the ingress and egress of the cattle.

The whole carpenter work of this barn was completed for \$110; there was 10,000 feet of lumber used in its construction, at \$10 per M.; 21 M. ash shingles at \$1.25; 300 pounds of nails at 5c.; and the frame was got out while clearing off a piece of woodland, and did not cost over \$20; the hinges and iron work cost \$10, making the total cost \$277. This barn according to the measurement of a ton of

hay given by Mr. Davison of Chelsea, would hold about 40 tons of hay. The barn we consider a cheap structure, but not so economical in its arrangement as the V-system heretofore noticed by us.

The Sorghum.

This crop, we presume, will be tried pretty extensively the present year, and as the time for planting is near at hand, there are two or three points to which it may be well to call the attention of cultivators.

First, Have they determined as yet for what purpose they will grow it. There is no utility in growing a lot of stalks as a great number did last year, because it happened to be fashionable to have a patch of Sorghum. If it be determined to grow the Sorghum for sugar, we incline to the opinion that it needs a little more careful planting, than if it be grown for fodder or for ornament. The most practiced cultivators of this plant inform us that the crystallizable sugar is procured nearly altogether from the seven or eight large joints of the cane which are nearest the roots, and that the tops should be cut off and used only for the purpose of pressing to obtain molasses. Now it is evident to us that the larger and heavier the cane, the greater will be the produce of sugar. Hence we urge that the Sorghum should be set in hills, or if in rows, the plants should be singled out so that they will be at least eight inches apart. From the testimony we have read we are inclined to favor a trial of the *Imphee* variety, and endorse strongly the advice given in a communication sent us by J. T. Blois of Jonesville: "Be sure and get pure seed, the pedigree of which can be traced through careful hands."

No faith should be put in assertions that this plant will grow in any kind of soil. A plant so rank, succulent, and containing so much crystallizable matter in its juices, must have a *rich deep soil*, if it be intended that it shall have large canes, a rapid growth, and early maturity, three conditions of obtaining not only full crops but a good quality of juice, that will yield crystallizable sugar.

If there be a choice of land, give this plant a rich highly manured dark sandy loam, in preference to a soil that is stiff or has much clay in its composition.

The proper time to sow the seed, says Mr. Blois, "is from the fifteenth of May to the first of June," and in marking the ground, the same authority says he prefers to mark it deep, so that he can hoe, plow or cultivate by the marker before the plant is seen above ground, for the seed is somewhat long in coming up, although it grows rapidly enough when it is once started. Four to five good stalks may stand in a hill, and the hills may be made from three and a half to four feet apart.

If the design is to use the crop for fodder, we would again repeat, be sure and have your ground

thoroughly worked, with the gang plow or the wheel cultivator, and well manured before the seed is sown. The seed in this case, should be sown in drills, not too thick, and not earlier than the first of June. The drills should be wide enough apart to work with the cultivator, which the crop will need an application of at least twice before it thoroughly covers the ground.

The crop if not cut before September, will yield enormously, probably not far from eight to ten tons per acre. In this connection we translate from the French a letter written by M. C. BLANCHE, director of the farm school at Mably, in the Loire department:

"Independently of the crops of vetches, of peas, and of Hungarian millet we have cultivated here for the two past years, sorghum for forage. In 1857, it occupied an area of nearly four acres, and the result was so satisfactory that we have decided to cultivate it for the future on a large scale. Its principal merit is that it furnishes such abundant nourishment to our stock in September and October, a time at which the last cuttings of luzerne and clover are very light and insufficient.

"In the culture of the Sorghum, we give the preference to light soils heavily manured, and thoroughly worked. The seed is sown broad cast, at the rate of nine pounds per acre, and is covered by a light harrow with wooden teeth. The seed, before sowing, was steeped in water for three days, for the purpose of hastening germination. Next year, Count l'Angles, director of the farm school, designs to cultivate the Sorghum in drills and broadcast, that he may compare the two methods.

"To obtain successive crops of green food, we have made three sowings, with an interval of fifteen days between each, commencing on the 15th of May. None is sown later than the 15th of July, as there is not time, nor heat enough after that date to the crop mature sufficiently to be of great service.

"During its growth the Sorghum was hoed once to keep the soil loose and free from weeds.

"The corn was cut with the sickle in September and October, and the stalks ranged from 7 to 11 feet in height. They were tied up in small sheaves, to facilitate their loading and unloading, and also their distribution in the mangers of the cattle.

"The product of the Sorghum, notwithstanding the extreme dryness of the summer, has been at the rate of 40,000 kilogrammes per hectare, or at the rate of a ton and three quarters per acre, in a sandy soil, of very middling condition. That cut about the first of September, had again begun to grow, and furnished a good pasturage at the end of October."

"All the animals on the farm have eaten it with great avidity, but to none has it been of more service than to the milch cows, which are very partial to it, and have given an increase of milk since it has been fed to them.

"As to the value of the Sorghum, we do not hesitate to admit that it is equal if not superior, in nutritive quality, to Indian corn. Corn is valued in proportion to the best meadow hay, but at 275 to 100. This would seem to show that the Sorghum ranks amongst the most valuable crops that can be grown for green cut food for all kinds of stock. O. BLANCHE,

"Subdirector of Farm School at Mobly."

This is the French practice with this plant, and is worthy of attention. The steeping of the seed for three days in water, previous to its being sown, is worth trying here, and ought to be noted.

As to the preparation for the manufacture of sugar, we postpone all remarks, until after the hay and wheat harvest. Then there will be both time to attend to it, and money on hand, we hope, to make the necessary purchases, to do up the sugar making on the best possible plan.

Analysis of Soils.

MR. EDITOR:—The utility of soil analysis has been a debatable question. While some have expected from it the most important results, others have maintained that such examinations were of no practical value to the farmer. I have no doubt that too much has been claimed on the one side, and too little conceded on the other.

It is now universally admitted that the mineral constituents of the soil are strictly essential to the growth of the plant. The small proportion of earthy matter in vegetable products formerly produced the impression that it was accidental, and did not at all supply the necessities of the plant. That such an opinion might naturally have been cherished before the relations of inorganic matter to the vegetable of which it formed a part had been thoroughly investigated, may be readily understood, when we remember that it frequently does not constitute more than one to two per cent of the whole mass. Thus 100 lbs. of wheat contain but little more than one pound of earthy matter; the potato, turnip, parsnip, carrot, &c., in their undried state contain less than this amount; while in the wood of the oak, there is less than $\frac{1}{4}$ of 1 per cent. Some other plants yield more of mineral matter than those referred to, yet seldom exceeding five or six per cent; but notwithstanding this it has been found beyond a question that the constituents of the soil though found in so minute a quantity in the plant, are indispensable to its growth.

Perhaps I ought to state for the information of a portion of your readers, that all vegetation is composed of two classes of substances, the Organic and Inorganic. The organic is that which disappears during combustion; the inorganic remains in the form of ash. The former is derived from the atmosphere and water, the latter from the soil. Carbonic acid, ammonia, and vapor of water are the principal con-

stituents of the air on which the plant feeds, and in connection with the water absorbed from the soil, are used to build up the greater part of the plant.

Moreover, the soil consists of two parts, the earthy and organic. The former is derived from disintegrated rock; the latter from decayed vegetation, and imparts to the soil a dark color. This organic matter is necessary to form a perfect soil, and by its more complete decomposition provides an additional source of carbonic acid for the plant.

Although the farmer is more dependent on the atmosphere than the soil for the elements of his crops, yet he has more control over the soil than the air. His greatest skill as an agriculturist consists in his management of the soil. Its productive capacity depends both on its physical and chemical conditions. If destitute of the elements required, it cannot sustain the plant. Vegetation will starve unless fed; and it must have certain kinds of food, for it cannot digest and assimilate everything. And more than this; deprive it of a single one of the articles for which it has a taste, and it will become sickly, and never arrive at mature growth. No soil is, therefore, a perfect soil that does not contain all the elements necessary to form the plant.

Again, the plant is very fastidious. It will not accept its food from the soil unless prepared in a certain way. In other words, the elements essential to vegetable growth may be present in the soil, but in such a state chemically that the plant cannot assimilate them.

Still farther, the constitution of the plant requires that the mineral constituents of the soil be present in unequal proportions. It needs more of one than another.

Also, different plants have unlike habits and tastes. One demands for its healthy growth a large proportion of some of the ingredients of the soil, while another needs less, and actively searches out those elements which were more minutely appropriated by the former.

Now, Mr. Editor, I have written until I ought to stop, and have not yet reached the subject which stands at the head of this communication. But it seemed necessary at first to state some general principles as a foundation for what may follow.

Is any valuable practical knowledge secured by an analysis of the soil? We answer in the affirmative.

In the first place, knowing the requirements of the crop sought to be raised, analysis will decide whether the soil possess the necessary constituents. Take, for illustration, a soil that has been exhausted by being constantly used in bearing wheat. If any element has been entirely removed by the succession of crops, an analysis determines the fact; or, if so far removed as to leave in the soil much less than is usual, this will also be determined. Now, show the farmer by analysis what constituents are wanting,

and he will immediately seek the cheapest and most effective mean of restoring them. All he wants is to know in what regard his soil is deficient. Without this knowledge he may supply the very substances which the soil already possesses in great abundance, and therefore he will not enrich it; for that is the richest soil that contains in proper proportions all the elements needed by the plant.

But it is sometimes said that the most valuable constituents of the soil are always present in very small proportions, and that a heavy dressing of manure produces so slight an increase in the quantity of these several constituents as to make hardly any appreciable difference in the analysis. Both of these statements I admit, but I think they have less weight in this discussion than at first they appear to have. The potash, soda, lime, phosphoric acid, etc., compounds on which the perfection of vegetable growth may be said eminently to depend, constitute, it is true, but a small part of the soil; but they must be there to form a productive soil, and if present, the analyst is able to weigh them, and give their percent; to determine whether there be more or less; and hence, is able to state whether found in as great a proportion as is usual in good soils. Should they be entirely wanting, it is easy to discover this fact also, and in either case the information would be very valuable.

Now with reference to the second part of the objection, that a sufficient quantity of manure to make a perceptible difference in the crop, and indeed, enough to secure an abundant crop, would hardly in many instances be appreciated in the analysis, we grant; that is, it would not necessarily make the elements thus supplied abundant in the soil; indeed, we grant more than this, that the soil thus manured, and which as a consequence produced a large crop, might not contain so great a proportion of the very constituents which secured a heavy crop, as another soil which is less productive. I admit that by simply looking at the figures which express the proportions of the several parts of the soil, we may deduce very erroneous conclusions. The skillful analyst always notes the manner in which the constituents are combined. It is not enough that they be present, they must be present in such a form that the plant can absorb them. Take an example: Pure silica is insoluble. Every farmer knows that white sand will not nourish the plant; but let this silica be combined with potash, or soda, or lime, and it can then be dissolved, and perform its office in the plant. On the other hand, the potash, soda and lime are not as soluble when combined with the silica as when existing alone, or in other combinations. Let us suppose a soil had been unproductive from want of lime. Lime is supplied in the form of gypsum, which being quite soluble, the plant immediately takes it up, into its circulation, and hence the first

crop is materially increased. Another soil, perhaps, contains more lime without manuring than the first after manuring; but it was combined with silica, or something else, which rendered it somewhat insoluble; and hence the crop raised is unable to get as much lime as needed, not because it is not there, but because the plant cannot absorb it.

Should I embody in the present communication all I wish to say on this subject, it would extend it to an undue length; and I will defer the balance of my remarks till the following number. L. R. FISK.

Agricultural College, Lansing, April, 1853.

The New American Cyclopædia.

It is but just that the agricultural press should call attention to the work above named, as the best work of the kind that has been issued from the press. In the first volume, there are three articles alone, namely, "Agricultural Schools," "Agricultural Chemistry," and "Agriculture," which are very valuable as collecting and bringing down to the present time all that is known on either subject, not in short paragraphs, but in articles of sufficient length to satisfy the general reader, and to give a clear exposition of the rise, progress, and present state of each subject. We shall refer to these subjects again. These articles are fair examples of the style of the work, which, if we may take the first volume for a specimen by which to judge of the remainder, will form a most complete work of reference, unequalled in the language, for its adaptation to the wants of every private library. In the biographical sketches, there is no name more trite than that of Alexander the Macedonian conqueror, amongst the ancients, yet the article headed with his name is clear, direct, and fresh, especially in its geography. So amongst the moderns, both dead and living, we refer to the names of John Quincy Adams, and Professor Agassiz, not as being better and fuller than others of equal importance, but as showing the whole style of the work, in connection with personages of whose history every one knows something. The first volume contains nearly twenty-five hundred subjects. The nearest approach to this work is the Penny Cyclopædia, issued in England by Mr. Knight, but that was very deficient on all American topics. This besides being superior in every department, is very full in all matters relating to this continent, and hence its name of *American* is well deserved. The work is edited by Messrs. C. A. Dana and Geo. Ripley, but the actual writers employed, are said to number over one hundred, and chiefly men known as being well versed in all that relates to the subjects committed to them.

This Cyclopædia is published by Messrs. Appleton of New-York, and is handsomely printed on clear good sized type. The agent for the sale of the work here is Mr. Geo. Fredricks, who may be addressed at the bookstore of S. B. Howe, Detroit.

Horticultural Department.

The State Agricultural College — What will it do for Horticulture?

The State Agricultural College, as the pioneer institution of this country, is, in a great measure, destitute of those landmarks which experience has set up for the guidance of ordinary institutions of learning. If we except the few hints that may be drawn from the practice of European establishments of a somewhat similar character, but conducted, for the most part, under widely different circumstances, and to supply wants of an essentially different character, this institution must rely solely upon the sound practical sense of those having it in charge; and, even then, in the light of future experience, it may doubtless find frequent occasion for improvement. As the first State institution of the kind established in the United States, it will doubtless be expected to become a model for others, destined to spring up in surrounding States to emulate, and, if possible, to excel it.

Under these circumstances the reputation of our State is deeply staked for its efficiency and success, and the people of the State may feel fully warranted, if not called upon, to speak freely their expectations and wishes concerning it. Indeed, experience would teach us, that only under the stimulating influence of public watchfulness, and an outspoken public sentiment, can such an institution be maintained in the highest state of efficiency.

To the Horticultural Department, to which the writer proposes chiefly to confine himself, the above remarks apply with their fullest force. Our State is generally conceded to be one of the most favorable in the northwest for horticultural operations generally, but possessing peculiarities of climate, soil, and location, even within its own limits, which require to be carefully studied to insure, in all cases, the best results.

Comparatively few individuals in our State employ professional gardeners to assume the management of their orchards or gardens; hence the necessity that every farmer should become a proficient in the sciences and arts connected with horticulture; while even those who employ a "professor," often find this knowledge their best safeguard against imposition.

But we need something more than a simple knowledge of the science and art necessary to properly manage the little plot of ground yeilded a garden. The State is full of incipient farms, on which are to spring up dwellings for their future cultivators; and if one may draw inference from the many barnlike, treeless, unsheltered houses to be met with throughout the country, there is much need of such cultivation of the public taste as shall induce a greater

regard for the location, appropriateness of finish, and also for the surroundings of the residences of our citizens. In order to secure this, some knowledge of the principles of Landscape Gardening is indispensable, to bring into action that intuitive perception of the beautiful and appropriate, which exists, in a greater or less degree, in all; and needs only to be roused from a latent to an active state, to enable the builder to take such advantage as he may of the natural features of his locality, and to adapt his improvements to its peculiarities with the happiest effect, and at the smallest expense.

The originators of the plan of this institution seem to have set out with the happy thought, that the teaching should be both theoretical and practical. In carrying out this intention, the establishment itself should be made, in an eminent degree, an example of the application of the principles of Landscape Gardening, and consequently, the Horticultural, as well as the Agricultural element should have been consulted in the selection of the domain, and especially in the laying out and planting of the grounds, and the construction of the buildings. In this particular, and also in the laying out and planting of specimen grounds, and in the construction, filling up, and management of conservatories for exotics, the institution may effect a double object; viz., the practical illustration of its teaching, and the general diffusion of cultivated taste, and of correct nomenclature, throughout the State; thus conferring a benefit upon the patrons of the institution, as well as its pupils.

And not in nomenclature only, may these specimens be of advantage to the community at large, but here the planter may resort to examine, compare, and identify varieties of plants, trees, or fruits, and to determine for himself their value, or adaptation to his wants, and so observe the different modes of pruning and management, with their effects upon trees of different varieties, or habits. Here, also, as the grounds are filled up, and the trees acquire age, he may obtain information with respect to the hardiness of varieties, or their adaptiveness to the climate of our State.

But the general planter is not the only one who may hope to derive information from the management of its grounds. For the instruction of the classes in Horticulture, experiments with the different modes of culture should doubtless be made, in the garden, as well as in the field; and the expense of each, as well as the result, carefully noted. Such experiments, with their results, would furnish to the gardener, or nurseryman, information of the most valuable kind, in addition to their value for the instruction of classes.

Such experiments may, in some cases, be expensive; too much so, indeed, to be attempted by individuals, under ordinary circumstances, and, yet,

may be desirable here, where the illustration of an important principle is desired.

The standing of those in charge of the institution would give to the results of their experiments an authority for science, accuracy, and reliability, such as few merely individual experiments could secure.

In addition to all this, the community at large might be greatly benefitted by the general distribution of the surplus seeds, plants, and cuttings of the gardens, and specimen grounds. T. T. LYON.

Standards vs. Rootgrafts.

It was not the original intention of these papers to pursue any subject to any length outside of the main issue; and I purpose in this, after a few brief remarks in answer to Mr. Lyon, to give some of the promised facts that go to show, at least to my mind, the superiority of standards over rootgrafts in the three important particulars of hardiness, productiveness, and early bearing.

It is past my ken, if Mr. Lyon, or any one else, can see any argument to militate against my position, that all vegetable, and animal products exist mainly for the use of man, in the fact of their improvement through his instrumentality. It would seem rather to confirm my view. They are all in the aggregate the ultimate expression of human qualities; and depend upon the state of the human mind for their progress and development.

This will no doubt seem to many minds only an unmeaning abstraction. These I shall not attempt to convince by any species of reasoning; while to those who occupy a stand point that enables them to see it to be true, argument would be superfluous.

Then there is the old dogma of a tree in a state of nature—of all our finest varieties originating in, and and were but improvements of the wild Type—than which there is no more obscuring and fatal falsity. As though there had been any cessation of creation. As though our Baldwins, and Greenings, and Seek-no-further, were not as much the handiwork of Infinitely Creative Energy as the Mosses and Lichens that carpeted the barren rocks, "when the morning stars sang together." As though they were not momentarily, and intimately dependent upon the breath of an ever present and vitalizing Deity as the first tree that ever grew. There is another old theory in regard to the origin of the different races of men, the correspondent, and counterpart to this; and whoso believes it must also hold that all our different varieties of Apple were from the bitter and worthless Crab, and that our delicious Nectarines, and Peaches had their parentage in, and must trace their pedigree from the poisonous, and innutritious Almond; but I must not enlarge.

Some of the facts of my experience bearing upon my first proposition, that standard grafts, and buds, as a rule, are more hardy than rootgrafts, I have giv-

en in former articles. As that the greater proportion of trees killed by the winter of '55-6 were rootgrafts. I had thirteen trees of the Tewksbury Blush, eleven rootgrafted, four of the eleven were killed; two I saved by boxing in earth, all were injured by the sloughing of the bark at the ground. The two on seedling stocks were not hurt.

I had but five rootgraft nursery trees. The most of them were cut down to the snow; while my principal stock, being standard buds, and grafts, although perhaps injured somewhat in their sap vessels, did not lose the first twig from trees that were not taken up.

No doubt the difference is more striking with nursery trees, than with those that have grown some years in the orchard. And there are men not a hundred miles distant, that could tell a tale of loss by the winter of '55-6, in rootgrafted trees, that would not only count up to thousands of trees, but to thousands of dollars invested. That they choose to keep silent is their privilege; I have no war with men, but with their practices. If they profit by the lesson it is enough.

Two or three facts, of the most striking, in regard to the superiority of stockworked trees in fruit producing qualities:

I have two trees of the Fallawater; one rootgrafted, and set out in '47; the other stockgrafted from the first—stock set, and grafted in '48. The rootgraft tree, although twice the size, has never borne half the fruit of the other. And I will remark also that about one third of the top of the rootgraft tree was killed by the winter two years ago; while the other escaped injury. My experience is the same with the Rambo. All my stockworked trees produce twice or three times the fruit of the rootgraft. And the only Rambo tree that was seriously injured in the body was rootworked, the top was also hurt more than any of my top grafts, or buds. Other varieties, although less striking, make the disparity obviously manifest.

I have held correspondence with some of the principal fruit and nursery men of the West, and I find but one to take the negative of this question; while his statement goes far to confirm my position. I will introduce some extracts from letters that will serve to show at least that I am not alone in my views:

"Our orchardists of longest experience, without a solitary exception to my knowledge, give a decided preference to stock worked trees. Formerly we budded Rambo, R. I. Greening, Roxbury Russet, and several other varieties, as they thus endured our trying winters, but killed badly when rootgrafted. The severe winter of '55-6 killed most of our trees of these varieties, whether root, or stock worked. Most varieties have thus far been better, and earlier bearers with me when stock worked than rootgraft-

ed. I have had sixteen years experience in tree culture here. Have 3000 trees in orchard. I regret that want of time compels me to be very brief. It is not because I think the subject one of little importance."

I will here give a paragraph from a letter, the writer of which says he can see no difference between the two methods:

"I take it for granted that the discussion in the MICHIGAN FARMER refers less to the hardness of trees in the nursery, than in the orchard, which is the more important consideration. I know not whether you have the same trouble in Michigan or not, but in this State rootgrafted trees of some varieties, are frequently injured or destroyed in the nursery by the bursting of the bark near the surface of the ground; the effect of severe frost while the sap is in circulation. Such are the Maiden's Blush, Rambo, and others. Yet I have not found these varieties, placed in the orchard, less hardy when rootgrafted than when propagated in any other way."

One other extract from the pen of a man of wide experience, and accurate observation:

"As your first question is almost, if not universally answered in the affirmative by all western nurserymen of experience, I deem it unnecessary to show at length that it is so, or even to go further and bring a theory to conform to the facts.

"I have not only upon my own grounds, but in every situation in my own county, and adjoining counties, for years, in examining orchards, found without an exception, that stock worked, and budded, compared with root grafted trees, standing side by side, have proved the hardest, and most abundant bearers; and it was after seeing the facts that I was led to ask *why*? Whoever spits against the wind spits in his own face. The best way is to let the people buy humbug, whether from the east or west, and they will inevitably reap humbug; and the reward will be in perfect agreement with the work. Then they will enquire for something better, and wish for something better; and then there will be some way of supplying that want."

I had hoped in this discussion to bring out some of the advocates of the negative of this question; or rather some of the practitioners of a system I feel called upon to repudiate and condemn. That they have failed to respond, would seem to indicate, either that my positions were so obviously false and untenable as to be unworthy of notice; or that they see plainly enough in the light of their own experience that their side of the question will not bear the scrutiny of investigation.

It would be of incalculable benefit—and what I heartily wish might be done—could the question be put to every man in the State who has planted trees during the last three years: What were your trees,

rootgrafts, or standards? where grown? and what proportion of each kind are now living?

I will venture to say that nine tenths of the answers would be to this import: "I got fifty trees" (more or less, last spring, or a year, or two or three) "from the east, but ten of them are alive. Whether they were rootgrafts, or standards, that is something I don't know anything about." This at least would be the answer of hundreds, to my certain knowledge.

When I contemplate the future of our own State in its infinite capacity for the production of the finest fruit, it is with a feeling of sadness that I see the yearly importation of tens of thousands of trees not only of doubtful adaptation as to climate, and uncertain identity as to varieties, but that have received in the very process of their production the conditions of a speedy dissolution. And it even seems that the death of so great a proportion of them at once, is the greatest, if not the only mitigation of the universal, and deep seated evil.

B. HATHAWAY.

Little Prairie Route.

Annuals.

We have a host of letters on our table making inquiries about the garden and amongst them none are more pressing for a response than some of the embossed envelope pink and yellow notes, which ask a multitude of questions, beginning with, "Where can I get a few good reliable seeds of annuals, that will bloom early and make a good show all the season?" To this we reply, send your orders to Thorburn & Co., of New York, if you want reliable seeds. There are two or three reasons for this. This firm has been long in the business, and understand it. They have a large steady demand, which it is for their interest to keep supplied with the best articles. There are but few seed stores in the United States which can afford to keep on hand a large supply of flower seeds, because the local sale in any one locality is small. The New York firm, on the contrary, has been long enough in business to know just how much they can sell, and hence the seeds are apt to be more fresh and good. They will send you a catalogue on application.

To have annuals bloom early, they should be started under a frame, somewhat shaded, and a very little heat in the bed. But as this will be altogether out of season now, the most simple plan is to prepare a border on the south side of a fence, making the soil as rich as possible with the oldest and best rotted manure to be had. If the soil is rather stiff get some good fine sand and mix it thoroughly with the soil till not a lump can be found larger than the head of a pin. Rake the surface till it is so mellow and fine that a dressing comb might be drawn through it, and leave the mark of each tooth. Then sow the seeds. This in our climate is not necessary

before the middle or third week of May, or even the first of June. But as this seems to be an early season probably the tenth of May will not be too early. All the covering necessary for the finer seeds is the sifting very evenly of a quarter of an inch of leaf mold if it is to be had, but if not, the best rich mellow mold, that can be had. The seeds may be either sown in drills or circles, but thin, and so that a trowel may be used to take up the plants when grown large enough, without disturbing those left behind. When sown in circles, the circle is lightly traced with a pointed stick, the seeds are sown in the furrow, and a piece of shingle is set up in the centre with the name of the seed on it. One of the difficulties of growing the young plants, is to keep them moist enough without drenching them with water. Bridgman, in his *Young Gardener's Assistant*, recommends that a stiff clothes brush should be dipped in water, and after shaking off the heaviest drops, draw the hand smartly over the bristles which will cause the water to fall on the young plants like dew. This should be done several times a day. Some may exclaim this is too much trouble, but fine flowers are like any other gratification, not to be had without labor.

Amongst the varieties which Mr. Barry recommends as easy of cultivation, is the *Camelia Balsam*, which he said delighted him when he tried it first, six years ago. The *Pæony Aster* is another new and beautiful flower, remarkably showy. Some of the best *German Stocks* should be had. The *Salpiglossis*, resembles the *Petunia* in flower, and is another new flower of decided beauty when well grown. The *French Marygolds* are always to be grown. *Petunias*, not to be forgotten. Neither if you desire a showy border, or small bed, must the *Portulacææ* and *Phlox Drummondii* be neglected, of which there are several new varieties. The *Candytufts*, white and purple, will both make handsome clusters or small beds, but they must not be transplanted. *Malope grandiflora*, is a very showy plant, and grows readily. The *Scabious*, double, is a beautiful flower. There are some novelties commended to the notice of gardeners, which we have not yet seen in flower, but which it would be well to try in favorable circumstances during the season. There are many other flowers we might name, but try those named above, with two or three of the new kinds, and let us hear how you succeed.

Save your Plums.

At the present time of writing there is a favorable prospect that the crop of stone fruit throughout the State will be a good one, if a steady effort is made to preserve it. Amongst the stone fruit none are more desirable than a good crop of plums, yet few are more difficult to secure without the exertion of well applied labor at the right time. The chief ene-

my of the plum is the insect known as the curculio, and which is a very troublesome customer, as every grower of plums is well aware. One of the difficulties incident to dealing with this enemy, is the want of a thorough knowledge of its habits. It has long been known that the insect deposits its egg in the young fruit; that this egg changes to a white footless grub, that eats into the fruit till it becomes diseased and falls to the ground; the grub as soon as full grown enters the ground and undergoes another change coming out in about four weeks, the perfect insect. Now the question arises, what becomes of the insect during the remainder of the season? Dr. Asa Fitch, in the portion of his report recently published in the volume of the *New York Transactions*, indicates as very probable, though not certain that the insect resorts to the young wood of the trees, and there deposits its eggs, which become grubs and remain dormant during the cold weather, but on the approach of spring eat their way out, and become the insects of the spring. Dr. Fitch is led to this conclusion by some facts which we will copy from his report in a future number. He suggests, as a conclusion drawn from the observations made, that it would be well to examine the bark of young shoots of the plum, the peach and the pear for the well known crescent shaped puncture. As the worms are only covered by the epidermis, soft soap or other alkaline wash would penetrate sufficiently to destroy them, if applied at the right time. Dr. Fitch does not say whether or not the worm, when it eats its way out of the bark in the spring, falls and enters the ground, or goes through its transformation in the tree. But one thing is certain, that if this be the true history of the insect, its destruction by gathering the fallen fruit is of far more importance than was heretofore supposed, for instead of each grub being the progenitor of but one insect for the next season's campaign, it is the immediate parent of some hundreds, perhaps thousands, for all that is yet known. How shall this great robber be destroyed, is the question?

Some recommend paving, and in an article published in the *FARMER* two years ago, and which we note has been recently copied into the *Rural New Yorker*, smudging with sulphur is recommended. Neither of these are as yet known to be fully effectual. Of the two the paving is the surest. But neither smudging nor paving, lessens the numbers of the insect. Besides the success of smudging with sulphur depends very much on the season. If rains are frequent, the smudging counts as so much labor thrown away, otherwise it will aid to preserve the fruit. It is not so sure as the plan strongly recommended and adhered to by J. J. Thomas, of jarring the trees, so that the insect falls on white sheets, is easily gathered and destroyed. This is the only sure process, and as it not only saves the fruit but prevents

a crop of curculios being hatched out for the next season, it is the best. It requires to be commenced after the flower of the plum tree begins to set into fruit, and carried on for about four or five weeks, and should be practiced on each tree every morning before the dew is off the ground, and consists simply in laying down sheets, so that the insects may be easily seen and gathered, as they fall at each knock or jar of the trees. This is the only plan of carrying on the war effectually, but we can assure our readers, that where it has been tried, it has amply paid all expenses. The first of the curculio season will soon be here, let us be prepared to war on this insect effectually.

Horticultural Notes.

Messrs. Hubbard & Davis, whose Nursery is located on Fort street, about a mile and a half west from the City Hall, have received a supply of those beautiful plants which Mr. Barry of Rochester, described in our last number. Those who desire to make selections, should pay them a visit early.

J. A. Robinson, of Battle Creek, writes that he has found the Hawley Apple a most excellent variety. "I have fruited this magnificent apple for three years, and I can say without fear of contradiction that it is the best fall apple of large size for this climate yet disseminated. I have raised them weighing seventeen ounces each. But Mr. Lyon is mistaken as to its season. It is here a September apple, ripening with what he calls the Michigan Golden Pippin, which variety was introduced here by some Ohio grafters, under the name of Greasy Pippin. It is with difficulty that the Hawley can be kept here until the first of October; if it were a month later, it would add greatly to its value as a market fruit. My soil is strong clayey loam."

A correspondent writes that he wants the actual experience of some one in this State in raising water melons. He is desirous of knowing the largest number that can be raised on a quarter of an acre, and how to raise the largest melons, and the best flavored.

[By the way the Patent Office has favored us with some seeds of new varieties, of which we will forward a few to any subscriber of the FARMER who will send us the stamps to pay return postage.—Ed.]

In answer to the same writer, who asks some seven other questions on raising crops. The strawberry question is put too late, but will be answered so that he can have a bearing bed next spring.

The culture of Radishes depends altogether on the soil, which needs to be rich, light and friable. Last fall we saw radishes growing in the garden of Mr. Geo. Carman of Sturgis, which were as large as Mangel Wurzel, and weighed 14 or 15 lbs. The other queries will be treated in the next number of the FARMER. Pie plant, as a matter of course can be raised from seed, but it is a slow process. The best method is to get plants of approved varieties, such as the Victoria, or Myatt's Giant, and give them rich deep soil, plenty of compost of swamp muck and stable manure each year, in the spring before the leaves start, covering the crown of the plant in the fall with the light peaty muck to the depth of twelve or fifteen inches.

Sulphur in Trees.—Mr. Eben Wight, Corresponding Secretary of the Massachusetts State Horticultural Society, in an article in Hovey's Magazine, effectually uses up the notion that holes bored into the trees and then filled with sulphur will have the effect of stopping the ravages of in-

sects! Mr. Wight relates that it was generally supposed that the tree absorbed the sulphur or quicksilver which was placed in it. Twenty-five years ago Mr. Wight bored auger holes in two elms, and filled them with sulphur, having plugged up the holes, with the design at the time of showing up the folly of the popular notion. This winter one of the elm trees having been struck by lightning, both were cut down. The stems were examined, and the sulphur was found in the plugged hole as it had been left. Instead of being absorbed into the tree, it was still there in the same condition as when first put there. So it is considered the absorption theory is exploded.

Veitch's Perfection Pea, is a new variety, which for flavor, size and productiveness is said to surpass all others; at least so says a practical man in the London Gardener's Chronicle. L. P. Kneeland of Southfield, last year grew a crop of the best tasting peas we have seen in this vicinity, they were called the *Emperor Pea* and were grown from some seed we gave him, and which was received from the Patent Office. He grew a crop for seed as well as for market.

The Garden is the title of a cheap pocket manual advertised by Messrs. Fowler and Wells, as adapted to the season. We have not yet seen it, but refer our readers to their advertisement for a description of its contents.

Gooseberries.—A writer in the Country Gentleman says he has raised gooseberries for six years without mildew. He recommends cutting away the old wood so as to have fruit only on the young healthy wood, occasionally transplanting. The bushes are trimmed up to be clear of the ground, and the wood is thinned out so that there is a good circulation of air and light let in freely to all parts of the bush. Ashes and chip manure are both used around the roots.

The Allen Seedling.—L. F. Allen of Black Rock, near Buffalo, has originated a new Raspberry to which he has given the name of Allen's Raspberry. It is described as a bright red, half oval shaped fruit, with large upright stalks. B. P. Johnson, Secretary of the N. Y. State Agricultural Society, writes that he esteems it, highly and thinks it superior in flavor to any raspberry he has ever eaten. Mr. Miller of Calmdale considers it the same as the "English Purple," but this Mr. Allen denies, as it is not similar in color or in growth to that variety.

Myatt's Linneus Rhubarb is the name of a new variety which Charles Downing speaks of in the Horticulturist as unsurpassed for market purposes, productive, and of good flavor.

Azalea Narcissiflora.—I can very strongly recommend this double white Chinese Azalea, sent home by Mr. Fortune. It seems to be a double variety of the old White Azalea Indica. It shows its flower buds, and comes into flower naturally a month or six weeks earlier than any other variety. It is as fragrant as the old white, in habit rather more compact, and not so robust in growth.—J. K., in Gard. Chronicle.

Apples.—Mr. J. S. Tibbits brought into Detroit on the 16th of April, a quantity of very fine well preserved Steeles Red, and English Russet apples for which he obtained 75 cents per bushel. He left a sample of these apples with us, and we found them really well preserved fruit.

While at Adair's nurseries a few days ago, we noticed that two large boxes of novelties, in the ornamental and greenhouse department had just been received direct from the great nursery establishment of Andre Leroy, at Angers. We suppose that these additions to his stock will be made known to our readers as soon as time will permit.

The Chufa, or Earth Almond.

This new esculent is said to be a native of the south of Spain, whence it has been introduced through the U. S. Patent Office, which, in consideration of its value to this country, has ordered one hundred bushels for farther distribution. That the chufa has become acclimated is no longer a question, as many can testify who have experimented with it the two past seasons. It is not a nut as its name would indicate, but a tuber about an inch in length and a half an inch in thickness, growing in the ground like the potato. In taste it resembles the chestnut or cocoonut, is very palatable either raw or cooked, green or dried; children especially are very fond of them, and as a substitute for coffee or cocoa it is pronounced excellent by all who have tried it. As a food for fattening poultry and swine I consider them by no means inferior to corn. A correspondent informs me that his poultry—turkies in particular—prefer them to any other food, and that he has fattened a hog on chufas alone, which were left in the ground after harvesting the crop.

The Chufa is not the notorious "ground nut" or "nut grass" of the Atlantic States, (although it is no doubt of the same genus). It is an annual, in this latitude at least, and will not germinate if left in the ground all winter. It is very prolific, yielding more than four hundred fold on an average in good soil. I counted 800 good sized tubers on one plant in my grounds last fall. My crop the past season produced at the rate of 200 bushels of tubers and a ton and a half of hay to the acre. The tops resemble prairie or marsh grass, all kinds of stock are fond of it, either green or dry. Before harvesting the tubers, the tops should be mown and cured for hay, or fed off by stock, and if the crop is intended for hogs they can be turned in and allowed to help themselves which they will do without any assistance or coaxing.

My experience in the cultivation and harvesting of the chufa corresponds so perfectly with that of H. B. Lum, Esq., of Ohio, that I will give his mode which he has kindly forwarded me. It is as follows:

"Soil.—The Chufa seems to prefer a sandy soil, but appears to be at home wherever corn or potatoes will flourish. It does finely on black muck, and produces well in soils too poor for almost anything else, and I cannot for a moment doubt but it will prove of great value for planting on such soils, to be harvested by hogs; the tops remaining to enrich the ground. I shall try them next season sown broadcast with such design.

Planting.—I would recommend the following, which I have found the best mode for planting:—From the 1st to the 10th of May place the tuber in a box of moist sand or earth, and give them a sunny exposure. In a few days they will swell out plump, and commence sprouting, when the sand may be sift-

ed from them and all the sprouted ones planted, and all the rest again placed in the box. By this process, when planted they will come up immediately and thus get the start of the weeds. In garden culture they may be planted in drills, two feet apart, by one foot in the row, and nearly two inches deep. I have practiced flat culture with the best of success, although others have told me that they have raised bountiful crops by hilling. One tuber in a hill is quite sufficient. They ripen in about four months from the time of planting.

Harvesting.—The harvesting of the Chufa, will be found the most difficult part of their cultivation. The following mode is the best I have tried: Commence as soon as they are ripe, and before the ground is saturated with water or it will be a difficult task. Pull up each hill by itself, and the tubers will nearly all adhere, whip them across a low wagon box, and then use a three-eighth mesh sieve with half the wires cut out one way, this will leave the meshes oblong and the dirt will readily sift through and leave the Chufas. In sandy soil a man in this way will gather from five to eight bushels in a day.

If fowls get to scratching them, nothing will induce them to desist, even if corn in plenty is strewn around. If the tubers are intended for eating or for coffee, they should be washed and spread where they can dry before winter, and when thus dried frost cannot injure them for growing. They may also be kept fresh and plump in the cellar."

D. D. TOOKER.

Napoleon, Jackson county.

[We have little doubt from what we have seen of these Chufas, that on a sandy soil, they would yield more food for hogs than an acre of light corn, and that they would well repay a trial. It will be seen also that Mr. Tooker commends them as excellent for poultry. He is the first to notice the value of this plant for that purpose. Those who desire seed can apply to him, as we saw that he had a good crop last year.

Potatoes.—Gerald Howatt of New Jersey, writes in the Country Gentleman that he can raise better and more even sized potatoes, from cuttings with but one eye than in any other way. He does not use the root end, as that invariably grows potatoes later by ten or twelve days than those which grow from the seed end. The cuttings are sliced off with only one eye in each, in wedge shaped pieces. He then recommends that the cuttings be dusted with lime, which aids in healing the cut, and in starting the bud to grow. Potato seed when thus treated should not be put in the dark, as this treatment is apt to make the sprouts weak. Mr. Howatt commends the Prince Albert potato as "the variety."

The New York State Society offers a premium of \$250 for a steam engine which will enable the operator to pulverize the soil, as well, and at a cheaper rate than it is now done with the plow, and to be so constructed as to be readily used on farms.

MICHIGAN FARMER.

ROBERT F. JOHNSTONE, EDITOR.

DETROIT, MAY, 1858.

A few words to Subscribers in arrears.

MORTGAGE SALE.—Default having been made in the condition of a certain mortgage, executed by Robert F. Johnstone and Eliza Ann, his wife, of the city of Detroit and State of Michigan, to Robert McClelland, now of said city, bearing date the 30th day of June, A. D. 1855, and recorded the same day and year, at 12 o'clock noon, in the office of Register of Deeds for the county of Wayne, in said State, in liber 22, pages 725, 726 and 727; the amount claimed to be due on said mortgage at the date of this notice being \$1349.89; and no suit or proceeding having been instituted at law to recover the debt now remaining secured by said mortgage, or any part thereof: Notice is therefore hereby given, that on Thursday, the first day of July next, at ten o'clock in the forenoon of that day, at the front door of the Court House in the said city of Detroit, (being the place of holding the Circuit Court for said county of Wayne) I shall sell at public vendue, to the highest bidder, the premises described in said mortgage, (or so much thereof as may be necessary to satisfy the amount due on said mortgage at the date of this notice, with interest and the costs and expenses allowed by law).

R. McCLELLAND.

The above is an extract from the *Free Press* of this city to which we wish to ask the attention of a large number, not all, of the readers of the *FARMER*, as it will be seen it interests us deeply, by a reference to our homestead, which though neither luxurious nor of great value, suits our wants, and we do not wish to be obliged to part with it, whilst there is enough owing the *FARMER*, honestly worked for and fairly and squarely earned, to pay the debt above named, were it five times as large.

It has not been our desire to fill our columns with appeals to subscribers for payments of subscriptions during the past winter, for none knew better the condition of the whole country. The change from high to low prices, with disastrous revulsions among commercial men in every locality exceeded all expectations. Those farmers who had money, had it in the hands of parties who could not repay it, and were as badly off as those having none. They could neither help themselves nor their neighbors. In this state, owing to its peculiar position, from the want of a currency of its own, the financial difficulties were more severe and general than in others, and the people have not yet got on a sound basis to do business. We, with the rest, have felt this peculiar state of things, and though our subscription list has kept up, our local agents have invariably written, that time must be afforded, as there was *no money* to be had for produce; and accordingly we have had the severest sort of night and day work to meet the ordinary expenses incident to the regular issue of the *FARMER*; and so much has this been the case, that we dared not divert from the business even the amount necessary to pay the rent or interest due on our home, hence we have been obliged to see the above notice posted, not because we were not willing to pay it, or had not earned sufficient, but because they

who owe the *FARMER* do not pay, thinking, we presume that a Michigan editor has no business with a place of his own, he ought to be nomad or an Ishmaelite. Now we can name six counties alone, in which, were the subscribers to pay us the aggregate due at the lowest club rates, we should be able to pay the amount named in the above notice *twice over*. We presume, of course, that all who receive the *FARMER* are honest. We cannot go round to each subscriber to collect, because the sums owing are individually small, and our time ought to be otherwise employed; but each can certainly remit what is due if he desire to do what is right, and to give that encouragement and support to the agricultural press of the state to which it is entitled. We hope very earnestly that our friends and subscribers will send in their arrearages at an early day.

We are pleased to note that the bill appropriating lands for the endowment of agricultural colleges has passed the House of Representatives, by a vote of 104 to 101. The bill as passed gives to each state, 20,000 acres for every representative and senator, to be used as a fund to supply an annual revenue for the support of such institutions. Much is due to the exertions of President Williams and the Hon. D. S. Walbridge for this result. The bill has now to pass the Senate, where we hope it may not stick fast.

Mr. Warren Isham, formerly editor of the *Farmer*, has recently become editor of the *Lake Superior Journal* published at Marquette, and has now gone up there to take charge of it.

We note an allusion to Stone Plover in *Porter's Spirit* for April 17, in which there is a mistake, and also a correction. The *Spirit* says:

"A horse named Stone Plover, bred as described, was entered for the Derby of 1853, in the name of Count Bathyan, but did not run for it. The allusion to Stilton is a mistake. He did not run for the Derby of 1850, or of any other year. Stone Plover, if he be the original horse, is nevertheless a well bred horse."

In stating that Stone Plover did not run for the Derby, the *Spirit* is mistaken, we have good authority for stating that he was entered, and ran for the Derby of 1853 and was placed in that race, but was ruled off the course of Great Britain, on account of the sharp practice of the owner, whom the *Spirit* names correctly.

Stilton did not win the Derby, as incorrectly stated in the advertisement, an error inadvertently made in copying. But he won the Great Metropolitan stakes, and was sold for \$25,000 to go abroad, we think to Russia. Mr. Williams, the present owner, purchased Stone Plover of Count Bathyan, in 1856, and brought him to this state.

We are pleased to learn that the well known Messenger mare, Lady Washington, the property of E. N. Wilcox, Esq., has recently foaled a horse colt, sired by the trotting stallion, Columbus, which promises to make quite an addition to the horse stock of the State.

Bees.—We call attention to the advertisement of A. F. Moon relative to Gilmore hives. Mr. Moon is one of the most expert and best apiarians, there is in the State. The Gilmore hives are decidedly a great improvement, we have now had one in operation for two years, and found no difficulty in preserving the bees, and having them come out healthy and strong in the spring.

Notes and Queries.

A. B. M.'s communication, very kindly intended to correct an error that was not made, should have been noticed last month. Mr. Y. did not say that the rich plains in the north part of Plymouth, referred to by us in the January number, were marshy or swampy. He only pointed them out to us contrasting their appearance now with what they seemed to him when he first saw them, and remarked that he had passed them by, and chosen the more hilly country to settle upon. Our correspondent will, therefore, understand that his well intended criticism does not need publication.

The N. Y. Transactions.—We are indebted to B. P. Johnson, Esq., the very able Secretary of the N. Y. State Society for a copy of the Transactions of the Society for 1855 and also for copies of addresses delivered before the Society, and the reports of Dr. Fitch. The volume is a little behind time this year, but is made up with care, and contains many articles of much value. We notice particularly Dr. Fitch's third Report on insects. This volume also contains an index to all the subjects treated of in the whole series as far as published. We shall recur to this volume again.

Report of the Massachusetts Board of Agriculture.—The Fifth Annual Report of the Massachusetts Board of Agriculture has been sent us by the compiler, C. L. Flint, Esq., Secretary to the Board. In this volume, the Secretary has given in detail the results of the exhibition, and has made the reports and decisions of the committees the text which he has illustrated with much instructive matter, and a great deal of useful information. It is in fact a model report, and exhibits how dry details may be made entertaining and useful. We shall have occasion to refer to this volume again.

We have received from the Secretary, M. B. Bateham, Esq., a copy of the Transactions of the Ohio Pomological Society, at its eighth session held at Cincinnati in September, and Columbus in December last.

The Messrs. Penfield of this city, it will be seen have a good assortment of all kinds of seeds, and can supply any quantity of the genuine sugar cane seed, either Imphee or Sorghum. They are also prepared to supply drain tiles of all the various sizes and patterns made.

Horse taming.—The Buffalo Advertiser claims to be cognizant of the secret which Mr. Rarey possesses, and which he employs to tame horses, and asserts that it consists "in raising one of the forefeet of the horse, doubling the knee, and keeping a strap wound around the fetlock, fastening the foot close to the arm or shoulder. The horse then stands upon three legs. Having next put on a surcingle, pass a long strap or rein through the surcingle, and fastening one end of it around the fetlock of the other forefoot; attach the other to the surcingle after the animal is thrown, so closely as to deprive it of the use of its limb. In this item the treatment may be varied by fastening the second fetlock to the arm or shoulder after the animal is down." This plan says the same paper is successfully pursued by many skillful horse breakers in western New York and the horse yields to the necessities of the case, his spirit of opposition being broken.

Does any one want a good pure bred, improved Essex bear, let them look at Mr. Tibbitts' advertisement. *Nero*, was procured direct from the stock of Mr. L. G. Morris, some years ago; and the only reason Mr. Tibbitts offers him for sale is that he has purchased "*Hanno*,"

another bear of the same stock, and does not wish to use *Nero* any longer.

Lime, Corn and Mexican potatoes.—J. S. Tibbitts informed us a few weeks ago, that last fall when he was putting his corn in crib, he sprinkled over it lightly a small quantity of air slacked lime, and he found that whilst many of his neighbors were complaining of mildewed and spoiled corn, his came out as bright and sound, and hard as hickory nuts. He also found that the lime was a complete protection against all kinds of vermin,—rats and mice not caring to have their paws in it. The lime was also found to be a preventive of the rot in potatoes. In the fall he put a quantity of Mexican potatoes in his cellar, which after a few days gave forth that strong offensive smell indicative of the potato disease. He immediately applied lime, which caused the smell to cease and the potatoes have come out quite healthy the present spring. We had a bushel of them, which we found good for baking. We are satisfied that the Mexican is not as good a potato as should be grown in this State, and that it is not adapted for general use.

Protection of Horses Against Flies.—A recent number of the Irish Farmers' Gazette, says that if a horse, previous to being taken out of the stable, be well sponged with a decoction of laurel leaves about the head, loins, &c., it would be a preventive of his being stung and annoyed with horse-flies. The decoction is made by boiling the leaves in water for a considerable time. The more leaves are used in proportion to the water, the better it will be. The decoction should be carefully put away, as it is highly poisonous. While writing the above, our attention is also directed to a statement in a recent number of the *Moniteur d'Agriculture* of Paris, which reminds its readers that M. de Serre the famous French agriculturist, made the discovery that a decoction of the leaves of the walnut tree, applied to horses and other animals as a wash, will be found a complete protection against the sting of insects. Try both.

Wheeler and Melick's Machines.—There is little need of calling attention to the horse powers and thrashing machines of Messrs. Wheeler and Melick of Albany, N. Y., they are so well known every where. This firm was the first to start the manufacture of these improved machines on a large scale, and we well recollect working one thirteen or fourteen years ago, and the satisfaction we then felt at the simplicity and economy of the machine. Since that time the whole combination of the horse power, thrasher, and separator has undergone many improvements, which still keeps them in the front rank of improved farming machines.

Our friend and agent, John Richard of Raisin has obtained an alleviation for his deafness, by means of an instrument, which he has found so successful that he recommends it to others.

New Patent Corn Husker.—D. C. Smith, Esq., of Tecumseh, has just invented a simple machine for this purpose, which for ingenuity and utility, is seldom excelled. He filed an application for a patent for the same in March last. The construction is simple, being made wholly of wrought iron, and weighing when complete only three pounds, and is furnished at a cost of five dollars. It is attached to the body by a belt around the waist, and will be informed enable a single hand to husk with ease, from the shock 100 bushels per day, and take suitable care of the stalks, and from the hill, 150 bushels. It does the work neatly and without injury or loss. It leaves the husks upon the stalk and can be worked well with mittens on.—*Tecumseh Herald*.

B. A. Alexander's annual sale of Shorthorns and other stock takes place on the 2d of June at his place at Woodburn, Kentucky. The sale of the Bourbon county Cattle Breeders Association will take place the next day. These sales afford a fair opportunity to procure good stock. The Woodburn farm is fifteen miles from Lexington.

Correction—A friend writes us that "when at Niles, we or the points of the compass must have got turned round, for Mr. Ballard's farm is on the west side of the river, and Mr. Paine's house is south of the village." We have reason to believe that the points of the compass remain steady in their old places, it must have been "we" who "got turned round."

Messrs. Bryant & Stratton propose to issue a new periodical to be called "*The American Merchant*," which is to be devoted to the commercial and productive interests of the country. The terms of this work is to be two dollars per annum.

The King Phillip Corn.—Mr. Fisher of Grosse Point, has tried the King Phillip corn pretty thoroughly, and makes several objections to it. On good well prepared land it produces a good crop of ears, but if let stand any time in the field the stem of the ear breaks, with the first shower of rain, the ear falls on the ground and a large portion of it is spoiled. Then again the crop of stalks are hardly worth cutting up. Mr. Fisher considers the eight rowed yellow, a better corn for Michigan, equally as productive and as early, and yielding a far superior crop of stalks.

Tobacco.—W. S. B. desires to know something of the cultivation of tobacco. In Connecticut the land on which tobacco is grown is a rich, thoroughly manured sandy soil, made both clean and deep by heavy manuring, and deep and frequent plowing. The seed beds are made by selecting a piece of the richest and mellowest garden soil, some what damp, about the middle of April, or a little later, sowing the seed in the same manner as cabbage seed is sown in seed beds for late cabbage. The variety of seed considered the best, is the Connecticut Seed Leaf, which can be furnished by Thorburn & Co., of New York. The seed should be rolled or pressed into the ground, and when the plants come up they should be kept clean and free from weeds. They are ready to transplant generally about the 10th to the 15th of June. The field intended for the growth of the crop should be made as fine as the finest kind of harrow will make it. The rows for the plants should be marked at three feet apart, and the plants should be set in the rows, at the distance of 2 to 2½ feet. If there should be rain, then is the time to transplant, if it is a dry time the plants should be watered as fast as set. The rows should be examined after setting, for several days so that where vacancies occur by decayed plants, new ones may be set in. As soon as the plants begin to stand up the rows are hoed. Then the cultivator is put at work. between the rows, and the plants are watched to guard against the tobacco worm, which is very destructive.

When the plants come in blossom, they are topped, and the suckers at each leaf are also broken off. In regard to curing, we doubt much if any written directions would answer, as a good deal depends on the judgment and experience of the cultivator, and the art must be learned by actual practice under some one who knows.

The Farmers of St. Clair and Macomb counties, it will be seen, have got a Black Hawk amongst them, to which was awarded the second prize last fall at the State Fair, in the class of horses of all work. He is a half brother to Washtenaw Chief, and possesses both size and action.

Michigan Stock Register.

The letter *e* after figures denotes English Herdbook, and where there is no letter the American Herdbook is meant.

Shorthorns.

No. 50.—MOSS ROSE. Roan heifer. Calved July 4th 1856. Bred by Thomas Lowrey, Geneseo, Livingston Co., New York. Owned by Findlay McHardy, Almont, Michigan.

Sire *Boston* 276, out of *Beauty*, by *Paragon* of the West 4649 E.

Dam *Red Rose*, bred by Col. W. W. Wadsworth, by *Red Rocket*.

g. dam, *Favorite*, the dam of the celebrated heifer *Jenny Lind*.

Red Rocket, was sired by imported *Rocket*, out of a dam, sired by *Defiance*; *Defiance* was sired by *Bartlett's Rover*, and he by *Thomas Weddle's* imported *Rover*.

Boston was by *Prince Albert* 2d, 857; who was out of *Lady Paxton* 2d, she was from *Lady Paxton* 1st by *Prince Charles* 2461 E; she from imported *Blossom* by *Comet Halley*, 1855 E. *Blossom* was sired by *Fitz Favorite* 1042 E, from a dam by a grandson of *Brampton* 54 E. *Prince Albert* 2d was by *Prince Albert* 847, who was by *Walter* 1072, out of imported *Arabella* by *Victory* 5565 E; her dam *Sally* by *Major* 2252 E; she from old *Sally* by a grandson of *Favorite* 252.

Beauty's dam was *Hannah Moore*, by imp. *Goldfinder* 2066 E; g. dam *Young Mary* by *Jupiter* 2170 E. *Young Mary* was bred by Mr. Clark of England, from *Mary* by *Saladin* 1417 E, her dam being from Mr. Meek's bull 2268 E.

No. 60.—YOUNG PRIDE. Red and white. Calved August 10, 1856. Bred by Henry Turner, Avon, Livingston Co., N. Y. Owned by Findlay McHardy of Almont, Michigan.

Sire *Bletsoe*, imported, bred by Mr. Beauford of Bletsoe, Bedfordshire, England.

Dam *Pride of the Valley*, by old *Splendor* 767.

g. dam, *Pride of the Nation*, by imported *Rocket*.

g. g. dam a cow bred by Mr. Tyler of the Nation Farm from Gen. Wadsworth's imported stock.

No. 61.—VICTORIA 2d. Roan. Calved June 20, 1856. Bred by F. McHardy of Avon N. Y. Owned by Findlay McHardy of Almont, Michigan.

Sire *Bletsoe*, imported, bred by Mr. Beauford, of Bletsoe, Bedfordshire, Eng.

Dam *Victoria*, by *Young Splendor* 2451½.

g. dam, *Lodica*, by *Wendle*, 5667 E.

g. g. dam, *Lucinda* by *Cadmus*.

g. g. g. dam, bred by Mr. E. LeRoy of New York from his imported stock of 1824.

No. 62.—DUCHESS. Roan. Calved July 10, 1853. Bred by Allen Ayrault, Geneseo, N. Y. Owned by Findlay McHardy of Almont, Michigan.

Sire *Young Livingston*, by *Young Trojan*.

Dam *Netherby* 2d, by imp. *Windle* 185.

g. dam, *Netherby* 1, by *Gambler* 2047 E.

g. g. dam, *Netherby*, imported by S. H. Newbold, by *Monarch* 4494 E.

g. g. g. dam, *Sweetbriar* by *Brampton* 54 E.

g. g. g. g. dam, *Roseberry* by *Western Comet* 698 E.

g. g. g. g. g. dam, by *Comet* 155 E.

g. g. g. g. g. g. dam, by a son of *Favorite* 252 E.

g. g. g. g. g. g. g. dam, by *Cupid* 177 E.

g. g. g. g. g. g. g. g. dam, by *Favorite*, 252 E.

Young Livingston was from *Victory* 3d by *Young Trojan*, he by *Trojan* of the E. H. B. *Victory* 3d was sired by *Meteor* 104, her dam, *Victory* 2d, by *Duke* of *Wellington* 15, imported by George Vail of Troy, N. Y.

The Markets and the Prospects

The prices of our principal articles of produce have not undergone much change since last month. Flour and wheat have receded slightly, the rates given for a short time not being sustained, as we hoped they would. But prices are not quite settled yet for the season and will not be till after navigation opens on the canals. The New York and Erie canal was to be opened on the 28th, and as the reduced rates of tolls have been adopted by the Canal Board, and will go into operation, of course much produce is now awaiting movement both at Oswego and Buffalo. The tolls have heretofore been at the rate of three mills per 1000 pounds per mi. The distance from Albany to Buffalo by Canal is 364 miles and the whole toll on 1000 pounds weight of wheat was therefore at the old rates; every bushel of wheat had to pay a fraction over 64 cents, with the reduced rate, there is only a small fraction over 44 cents to be paid upon each bushel. On a barrel of flour the difference is as 14 to 22. This reduction is intended to counteract the low rates at which the railroad lines were doing the freighting business, and will undoubtedly, not only increase the business of the canals, but will be the means of making a very brisk demand for produce in the fall, so that buyers may reap the benefit of the low rates of transportation.

The very substantial and reliable firm of J. L. Hurd & Co., of this city advertize to take flour from this port to Albany at 67 cents per bbl. and to New York at 60 cents, which is equal to 16 cents on wheat, and as they are the agents and consignees of the American Transportation Co., and the Western Transportation Co., as well as the N. Y. Central Railroad, their facilities for doing the work of propelling forward produce are unrivalled. The rates where produce is sent forward by railroad is rather higher of course than those we have quoted. Barreled potatoes have been sent forward in considerable quantities to New York this season, since navigation opened. The great trouble with all our Michigan potatoes, is that we grow so many of the yellow fleshed varieties, which will never bring so much as good white fleshed kinds. Growers would do well to remember that medium sized sound white kinds, sell at the present moment in the New York market from \$2.50 to \$3.00, whilst the western reds, Yellow Pink Eyes and the soft soapy Merinos are worth but \$1.50 to \$1.75. The forwarders ship from this port to New York by railroad at 75 cents per barrel. The cost of barreling is not less than 25 cents, which leaves for the good kinds from 1.50 to 2.00 per barrel, or the difference of almost 25 to 40 cents per bushel to the grower. Will our farmers take the hint this season? Potatoes pay well at 25 to 40 cents per bushel, and it is just as easy to raise the kinds which will pay the highest price; as those that are fit only to feed to the hogs. Secure good seed.

The reports of the foreign markets, do not lead us to hope for any advance in our own. The British markets show full supplies at low rates, and the tendency is declining. The supply in the New York market is large, and estimated according to the lowest figures at a quarter of a million barrels of flour, with the western supplies only begun to go forward. We cannot hope for a great advance at present, in any kind of produce. We think corn will hold its own better than any other grain.

The wool trade is very quiet. It is generally admitted that the stock at the east is getting fairly cleared out, and it is believed that there is a large supply in the hands of dealers in the interior, of last year's clip. We still adhere to the opinion that the clip of wool throughout the country will be much lighter this year than last, and that it will be proved so in a short time after the shearing season is over, when it will be found that wool will advance in price. Besides, there seems to be a general opinion that manufacturing operations must be resumed very fully during the summer and autumn, causing a more extensive demand for wool, especially the finer kinds of domestic. The rates now given in the New York and Boston markets are not different from those of last month, sales having been made to a considerable extent. They are as follows:

	Boston.	New York.
American Saxon,.....	44 a 46	45 a 46
Full blood Merino,.....	38 a 40	36 a 40
Half & 3/4 blood,.....	32 a 36	32 a 36
Quarter blood,.....	23 a 28	24 a 30

Beef rules somewhat lower in the eastern markets, but prime good animals seem to be scarce. We send but few good ones east, for our cattle bear a poor character there.

In remarking upon a sale made on the 21st of April, the New York Tribune says:

"George Ayrault for Robert Rome, 62 head of Michigan Stock, a few of which are very good, and the others as rough as most of the stock from that behind-the-age State. The choice sold at 10c and some others at 8 cents."

The same Rome sold at Albany, to go to Boston, two car loads of heavy Michigan cattle at 5 cents live weight.

Good mutton sheep are about as good a kind of stock for the eastern market as any at present. First class sheep seem to be in demand, and rule from \$7 to \$12 per head, and some heavy Leicesters have sold as high as \$15.

Here there is nothing to note, except that good fair cattle bring from 3 1/2 to 4 cents live weight. Good sheep are not plenty, and may be quoted as worth \$2.50 to \$5.00.

The Markets.

BREADSTUFFS AND GRAIN.		SEEDS, PLASTER, SALT, &c.	
Flour, bbl.....	\$4.75 a 5.00	Clover per bush.....	\$4.00 a 5.00
Cornmeal, 100 lbs.....	1.00 a 0.00	Timothy.....	2.50 a 3.00
Buckwheat, 100 lbs.....	1.00 a 0.00	Red top.....	0.00 a 2.00
Wheat, bush.....	0.75 a 0.85	Blue grass.....	1.25 a 3.00
Corn, bush.....	0.40 a 0.4	Millet, 0.50	Hungarian grass \$3
Oats, bush.....	0.27 a 0.30	Sandusky plaster, bbl, 1, 5 a	
Barley, per 100 lbs.....	1.00 a 1.12	Grand River.....	1.50 a
BEEF, MUTTON, &c.		N Y Plaster.....	1.13 a
Beef on foot.....	\$2.50 a 3.25	Sandusky water lime, 1, 50 a	
Beef dressed.....	4.00 a 5.50	N Y do.....	1.31 a
Sheep, dressed per lb.....	0.33 a 0.05	Salt fine bbl.....	2.10 a
Sheep on foot.....	3.00 a 5.50	do coarse.....	2.25 a
Hogs per lb.....	5.00 a 5.50	MISCELLANEOUS.	
Turkey.....	1.00 a 1.25	Apples per bush.....	70.00 a 1.50
Chickens, pair.....	0.25 a 0.75	White flax, half bbl.....	4.00 a 4.50
Geese.....	37 1/2 a 37 1/2	White beans per bush.....	0.75 a 1.00
Eggs per doz.....	5 a	Sheep pelts.....	1.00 a 2.50
Butter, per lb fresh.....	32 a 34	Hay timothy, ton.....	5.00 a 10.00
do. Birklin.....	10 a 12	Common.....	6.00 a 8.00
Cheese per lb.....	9 a 11	Honey.....	14 a
		Potatoes.....	0.20 a 0.40

NEW PLANTS AND SHRUBS.

Just received by the subscribers the following Plants:

Forsythia Virridissima.
Wiegela Rosea.
Deutzia Gracilis.
Spiraea Fortunei, or Callous.
Spiraea Reevesii Lanceolata.

A large assortment of choice Dahlias and Verbenas, (many new varieties just received, will be ready for bedding out by the middle of May) also Tomato, Cabbage, Celery and Cauliflower Plants, for sale at the nursery or will be delivered in the city. Apply to

HUBBARD & DAVIS.

Detroit, April 20. 11

WOOL, CLOTH & FLANNEL.

WM. WALLACE, of Battle Creek.

ANNOUNCES that he is prepared, with new and improved machinery in the best style, and keeps for sale

Cass merces, Fulled Cloths, Red Flannels, Sattinets, and fine woolen stuffs.

Or he will manufacture on the usual terms goods to suit and accommodate his customers. He will also dress wine colored or other flannel for women's wear.

Wool will be received in exchange for any of his manufactured goods, and he will receive wool at the Railroad Depot, and deliver the goods at the same place.

Prompt and strict attention paid to all orders and directions.

WM. WALLACE,
 Battle Creek, Mich.

SECOND ANNUAL SALE

Of the

BOURBON COUNTY

DURHAM CATTLE SALE ASSOCIATION.

ON Thursday the 3d day of June next, the Bourbon County Durham Cattle Sale Association will make its second sale at public auction, on the Bourbon Fair Grounds, near Paris, of thorough bred Durham Cattle. Some eighty head will be sold according to catalogue, to the highest bidder, without reserve or by bidding. The stock is from the herds of experienced and successful breeders, and will compare with any cattle in the Union.

Mr. R. A. Alexander, of Woodford county, whose herd is equal to any in Europe or America, will make his annual sale on the day previous, which will enable distant purchasers to attend both sales without loss of time. Those attending his sale can reach Paris by railroad in time for the Bourbon Association sale.

Terms—Four months credit for negotiable paper, or a discount of eight per cent, per annum for cash.

Catalogues can be had on application to the Secretary.

R. H. LINDSAY, Secy.

GEO. M. BEDFORD, Pres't

A BOOK FOR THE SEASON.

THE GARDEN; A NEW POCKET MANUAL

OF PRACTICAL HORTICULTURE. Everybody who owns or rents a garden, large or small, will find this best of all garden manuals indispensable. It gives full directions for the cultivation of

ALL THE KITCHEN VEGETABLES;

ALL KINDS OF FRUITS AND BERRIES;

ALL SORTS OF FLOWERS AND SHRUBS; AND

ALL THE BEST ORNAMENTAL TREES.

It tells all about

SOILS AND MANURES; VEGETABLE GROWTH; AND
THE STRUCTURE OF PLANTS; WHAT PLANTS LIVE UPON;
and shows

HOW TO PREPARE THE GROUND;

HOW TO SOW SEEDS;

HOW TO CULTIVATE;

HOW TO GRAFT AND BUD;

HOW TO PRESERVE FRUITS AND VEGETABLES;

HOW TO DO EVERYTHING.

It is

POPULAR, RELIABLE, FULL OF INFORMATION,
PRACTICAL, COMPREHENSIVE, VERY CHEAP.

You may readily understand it, easily remember its directions, and without difficulty put them in practice. It is *meum in parvo*, and may be carried in the pocket. Adapted to all sections, and sold everywhere. Orders should be sent in at once. Price, in paper, 30 cents; in mu-lin, 50 cents.

The Series of four "Rural Hand-Books" to which this belongs—*"The House," "The Garden," "The Farm,"* and *"Domestic Animals"* will be furnished to subscribers ordering them all at the same time for \$1. Address **FWLER AND WELLS,** 308 Broadway, New York.

**EMPLOYMENT.****\$50 a Month and a 1 Expenses Paid.**

AN AGENT is wanted in every town and county in the United States, to engage in a respectable and easy business, by which the above profits may be certainly realized. For full particulars, address **H. CONNETT & C.,** corner of Broome and Mercer, sts., New York City, enclosing one postage stamp to prepay response.

\$1,000 A YEAR! \$1,000 A YEAR!!

\$1,000 A YEAR. **AN AGENT** is wanted in every Town and County in the United States, to engage in a respectable and easy business, by which the above profits may be certainly realized. It is an article of daily consumption, and can be manufactured in the agent's dwelling; secured by copyright; sale as permanent as floor. Address **JAMES C. HORNE,** Box No. 4,561, New York Post Office, enclosing one stamp to prepay postage.

A RETIRED PHYSICIAN.

Seventy-five years of age, whose hands of life have nearly run out, discovered while in the East Indies, a certain cure for Consumption, Asthma, Bronchitis, Cough, Croup, and General Debility. The remedy was discovered by him when his only child, a daughter, was given up to die. Wishing to do as much good as possible, he will send to such of his afflicted fellow-beings as request it, his recipe, with full and explicit directions for making it up, and successfully call it. He requires each applicant to enclose him one shilling—three cents to be returned as postage on the recipe, and the remainder to be applied to the payment of the advertisement.
Address: **Dr. H. JAMES,** 19 Grand St., Jersey City, N. Y.

DYSPEPSIA AND FITS.**Dr. TRACY DELORME,**

THE GREAT CURE OF CONSUMPTION, was for several years so badly afflicted by Dyspepsia, that for part of the time he was confined to his bed. He was eventually cured by a prescription, furnished him by a young clairvoyant girl. This prescription, given by a mere child, while in a state of trance, has cured everybody who has taken it, never having failed once. It is equally as sure in cases of **FITS** as of **DYSPEPSIA.** The ingredients may be found in any drug store. I will send this valuable prescription to any person on the receipt of one stamp to pay postage.
Address **Dr. TRACY DELORME,** GREAT CURE OF CONSUMPTION, New York Post Office.

A NEW EDITION OF VOL. I. NOW READY.

The First Edition Having Been Exhausted!*Volume 2 will be issued in May.*

D. Appleton & Co., 346 and 348 Broadway, N. Y.

HAVE JUST PUBLISHED, BY SUBSCRIPTION ONLY.

VOLUME I.—("A—Araguay")

OF THE

NEW AMERICAN CYCLOPEDIA:**A Popular Dictionary of General Knowledge,**

EDITED BY

GEORGE RIPLEY AND CHARLES A. DANA,

Assisted by a numerous but Select Corps of Writers.

The object of

THE NEW AMERICAN CYCLOPEDIA

is to exhibit, in a new condensed form, the present state of human knowledge on every subject of rational inquiry in

SCIENCE,
PHILOSOPHY,
AGRICULTURE,
COMMERCE,
MANUFACTURES,
LITERATURE,
ART,
RELIGION,
MEDICINE,
MATHEMATICS,
ASTRONOMY,
HISTORY,
TRADE.

LITERATURE,
POLITICS,
BIOGRAPHY,
GEOGRAPHY,
TRAVEL,
CHEMISTRY.

With this design, the numerous Encyclopedias, Dictionaries of special branches of study, and popular conversations Lexicons, in the English, French, and German languages, have, of course, been diligently consulted and compared. But the **NEW AMERICAN CYCLOPEDIA** is not founded on any European model; in its plan and elaboration it is strictly original. Many of the writers employed on this work have enriched it with their personal researches, observations and discoveries.

As far as is consistent with thoroughness of research and exactness of statement, the popular method has been pursued. By condensation and brevity, the Editors have been enabled to introduce a much greater variety of subjects than is usually found in similar works, and thus to enhance the value of the **NEW AMERICAN CYCLOPEDIA** as a Manual of Universal Reference. At the same time an entertaining style has been aimed at, wherever it would not interfere with more important considerations. Special care has been bestowed on the department of Living Biography.

In the preparation of the present volume, nearly a hundred collaborators have assisted, including persons in almost every part of the United States, in Great Britain, and on the Continent of Europe whose names have attained an honorable distinction, each in some special branch of learning. No restriction has been imposed on them, except that of abstinence from the expression of private dogmatic judgments, and from the introduction of sectarian comments, at war with the historical character of the work. In this fact, it is hoped, will be found a guarantee of the universality and impartiality of the **NEW AMERICAN CYCLOPEDIA**, which, the Publishers do not hesitate to say will be superior in extent, variety and exactness of information to any similar publication in the English language.

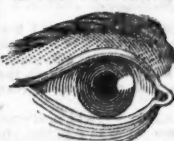
The first volume, now just issued, includes nearly 3,000 articles. The second volume is in press, and the whole work in a state of forwardness.

The work will be published exclusively by subscription, in fifteen large octavo volumes, each containing 750 two column pages, and in external appearance will be at once elegant and substantial.

Subscriptions received, payable on delivery.
Price—in Cloth, \$3; Library style, leather, \$3 50; half morocco, \$4; half Russia, extra, \$4 50.

The first volume will be sent by mail, free of postage, to any address, on remittance of the price.

Booksellers desiring to act as agents, will please address the Publishers.

DR. H. BIGELOW, OCULIST,

(Office Room No. 9 Sheldon Block opposite the Peninsular Bank, Jefferson ave., Detroit, Mich.)

Respectfully announces to the public generally that he is now engaged in treating the various diseases of the Eye, with much success. Many Certificates and recommendations might here be given, but such things are so common at this day, that it is deemed sufficient

merely to say to those afflicted, come and SEE HIS treatment, is the same as that practised by the late Dr. George Bigelow.
May, 571yr.

PLOWS! PLOWS!!

STARBUCK'S Eagle & Ruggle's, Nourse & Mason's Plows, of every description, now on hand for Spring sales,
ma2t At **PENFIELD'S,** 103 Woodward Ave. Detroit.



Ayer's Pills

Are particularly adapted to derangements of the digestive apparatus, and disordered action of the blood. A large part of all the complaints that afflict mankind originate in one or more of these, and consequently these Pills are found to cure many varieties of disease.

But joined are the statements from some eminent physicians, of their effects in their practice.

AS A FAMILY PHYSIC.

From Dr. E. W. Cartwright, of New Orleans.

"Your pills are the prince of purges. Their excellent qualities surpass any cathartic we possess. They are mild, but very certain and effectual in their action on the bowels, which makes them invaluable to us in the daily treatment of disease."

FOR JAUNDICE AND ALL LIVER COMPLAINTS.

From Dr. Theodore Bell, of New York city

"Not only are your PILLS admirably adapted to the purpose as an aperient, but I find their beneficial effects upon the Liver very marked indeed. They have in my practice proved more effectual for the cure of *bilious complaints* than any one remedy I can mention. I am very rejoiced that we have at length a purgative which is worthy the confidence of the profession and the people."

DYSPEPSIA — INDIGESTION.

From Dr. Henry J. Knox, of St. Louis.

"The PILLS you were kind enough to send me have been all used in my practice, and have so far done me that they are truly an extraordinary medicine. So peculiarly are they adapted to the disease of the human system, that they seem to work upon them alone. I have cured a large number of cases of *dyspepsia and indigestion* with them, which have resisted the other remedies we commonly use. Indeed I have experimentally found them to be effectual in almost all the complaints for which you recommend them."

DYSENTERY — DIARRHŒA — RELAX.

From Dr. J. G. Green, of Chicago.

"Your PILLS have had a long trial in my practice, and I hold them in esteem as one of the best aperients I have ever found. Their laxative effect upon the liver makes them an excellent remedy. When given in small doses, for *bilious dysentery and diarrhœa*. Their sugar-coating makes them very acceptable and convenient for the use of women and children."

CONSTIPATION — COSTIVENESS.

From Dr. J. P. Vaughn, Montreal, Canada.

"Too much cannot be said of your PILLS for the cure of *costiveness*. If the ranks of our fraternity have found them as efficacious as I have, they should join me in proclaiming it the benefit of the multitudes who suffer from that complaint, which, although bad enough in itself, is the precursor of other troubles are worse. I believe costiveness to originate in the liver, but your PILLS affect that organ and cure the disease."

IMPURITIES OF THE BLOOD — SCROFULA — ERYSIPELAS — SALT RHEUM — ULCER — TUMORS —

RHEUMATISM — GOUT — NEURALGIA.

From Dr. Ezekiel Hall, Philadelphia.

"You were right, Doctor, in saying that your PILLS *purify the blood*. They do that. I have used them of late years in my practice, and agree with your statement of their efficacy. They stimulate the excretories, and carry off the impurities that stagnate in the blood, encumbering the system. They stimulate the organs of digestion, and infuse vitality and vigor into the system. No remedies as you prepare are a national benefit, and you deserve great credit for them."

FOR HEADACHE — SICK HEADACHE — FOUL STOMACH — PILES — DROPSY — PLETHORA — PARALYSIS — FITS — &c.

From Edward Boyd, Baltimore.

DEAR DR. AYER: I can't answer you what complaints I have cured with your PILLS be so then to say all that we ever treat with a *purgative medicine*. I place great dependence on an effectual cathartic in my daily content with disease, and believing as I do that your PILLS afford us the best we have, of course value them highly."

"Most of the Pills in market contain Mercury, which, although a valuable remedy in skillful hands is dangerous in a public pill, from the dangerous consequences that frequently follow its incautious use. These contain no mercury or mineral substance whatever."

Prepared by Dr. J. AYER,
PRACTICAL AND ANALYTICAL CHEMIST,
LOWELL, MASS.

And sold by J. S. Farrand Detroit; and by all Druggists every where.

Feb 63-ly

FURNITURE WAREHOUSE, ON JEFFERSON AVENUE,

BELOW MICHIGAN EXCHANGE, DETROIT.

The Subscribers keep constantly on hand a large stock of

ELEGANT FURNITURE,

Both Modern and Antique Styles; in Rosewood, Mahogany and Domestic Wood.

Those wishing rich and fashionable Furniture, will always find a great variety to select from—equal in every respect to anything in the Eastern market. Being in constant receipt of Pattern Pieces from the

FASHIONABLE MAKERS IN NEW YORK

they are enabled to guarantee the most PERFECT SATISFACTION to their customers.

They also keep constantly on hand a large and complete assortment of Plain Furniture of Mahogany, Cherry and Walnut. In short, every article in the line of Household Furniture will be found in their stock, including Chairs of every style and price, from four shillings to sixty dollars each. The subscribers now have on hand, and make to order, best

HAIR MATTRESSES.

Their customers can rely upon getting a genuine article.

CORN-HUSK MATTRESSES AND STRAW PALLIASES

constantly on hand. For the trade we keep constantly a large stock of Mahogany and Rosewood Veneer.

Jan 63. ft.

STEVENS & ZUG.

PILES! PILES! PILES!

This hitherto intractable disease, of every form and in every stage,

CURED BY EXTERNAL APPLICATION ONLY.

DR. CAVANAUGH'S PILE SALVE

WILL never fail in giving immediate relief and positively curing the worst and most obstinate cases of Hemorrhoids, or Piles. It is the only

INFALLIBLE REMEDY KNOWN

here or elsewhere for the Piles, and is the result of years of patient study and investigation.

Sufferers from Piles now have a remedy at hand which will

STAND THE TEST OF TRIAL,

without a fear of failure on its part, to do all the proprietor claims for it.

Full directions accompanying each box; and all that is requisite is strictly to observe them, and a cure is certain to follow.

The proprietor refers to the following testimonials from gentlemen of character and standing, who have voluntarily given their certificates in its favor, in regard to its efficacy in their own cases. Read them.

The following is from one of the most reliable citizens of Chicago, the late Treasurer of Cook Co., Ill.:

Chicago, July 26, 1855.

DR. CAVANAUGH—Dear Sir, I wish hereby to make known to the afflicted that I have been troubled with the Piles for twenty years or upwards, and at times most severely. And during a recent and exceedingly painful attack, a friend procured a box of your Salve and asked me to give it a trial. I did so. Not, however, with the expectation of benefitting my disease, for truly, I had tried so many applications I had lost confidence in all. But in making use of your Salve, I soon found that it was doing me good; and really it is incredible to myself, that with only about two weeks use of your Salve, I am, so far as I can judge, a well man.

I most cheerfully make this statement, believing it due both to yourself and such as may be afflicted with the most trying and painful disease. I do not hesitate to say that I consider your preparation an invaluable remedy for the Piles.

Most sincerely yours,

H. N. FEARL.

The Hon. Richard Yates, late member of Congress from the Springfield, Ill., District, says:

JACKSONVILLE Ill., Nov. 15, 1851.

DR. THOS. H. CAVANAUGH—Dear Sir: The preparation, Cavanaugh's Pile Salve, which you furnished, I found of great service producing an easy and speedy cure. I do not hesitate to recommend it as an invaluable remedy for the Piles.

Respectfully,

RICHARD YATES.

Also Dr. T. H. Cavanaugh's Celebrated

GREEN SALVE.

Price \$1 per box. For sale in Detroit by T. & J. Hinchman, Higby & Stearns, H. & L. Simonsen, H. Haight, Farrand & Wheaton, T. R. Spence, and Otto Leuschner by all Druggists throughout the State.

Dec. 1yr

DR. T. R. CAVANAUGH, Sole Proprietor,
St. Louis, Missouri.

1858. MICHIGAN BREEDING STABLE, 1858.

Is Composed of the following Stallions:

OTHELLO OR BLACK PRINCE.

Jet black, eight years old, 15½ hands high, weight 1100 pounds. Sire Hills Vermont Black Hawk. Dam was Morgan and Messenger. Winner of the first prize at the Vermont State Fair, held at Montpelier, and at the Rutland Horse at Vermont State Fair at Rutland 1855. First Prize at Michigan State Fair 1856 and at Branch County Fair same season. He has invariably been awarded the first prize at every Fair where he has been exhibited.

Terms of service \$20 the season, or \$25 to insure.

VERMONT HERO.

Black, nine years old, 16 hands high and weighs 1200 lbs. Sire Sherman Black Hawk by Hills Vermont Black Hawk. Dam by Young Hamiltonian by Bishop Hamiltonian by Im. Messenger, g. d. by Imp. Matchem, dam of Young Hamiltonian by Leonidas g. d. by Bellfounder.

Winner of the 2d premium for speed at the Michigan State Fair 1856, time 2:40, first premium at the Branch County Fair same season, time 2:47. And is without doubt the fastest stallion of his size in the west.

Terms of service \$15 the season, or \$20 to insure.

MOSCOW OR DEFIANCE.

Brown, ten years old, 15 hands high weighs 1000 pounds. Sire Defiance, an imported thoroughbred; out of the dam of Lady Moscow sired by a thorough bred horse.

Moscow although nearly thoroughbred is from trotting stock on the side of both sire and dam and has himself achieved many triumphs on the turf. His performances are well known in Quebec, Montreal, St. Louis and Chicago. His public performances have averaged from 2:37 to 2:43. He has a half sister on his sire's side whose owner claims has trotted a single mile in 2:24 and equalled the best time on record: three miles and repeat. (See advertisement in Porter's Spirit of the Times Jan. 16.)

His half sister, Lady Moscow, on the dam's side has long been upon the turf and her performances are too well known to need any notice in this advertisement.

It is impossible in this place to give full pedigrees or detailed accounts of performances, but will be pleased to give full particulars to any who call on us.

Terms of service \$20 the season, or \$25 to insure.

GRAY MESSENGER.

White, 16 hands high, 11 years old, weight 1200 pounds. Sire Van Hovanburgh Messenger by Ogden's Messenger, dam nearly full bred Messenger mare.

Terms of service \$8 the season or \$10 to insure.

I flatter myself that I am now able to offer the public a stable of breeding stallions that has no equal in the west if anywhere. They have size, style, speed, and blood unsurpassed. Three of the above horses can trot a side of 2.50 any day without train or preparation. My Stable is located 1¼ miles east of Coldwater village.

April 1st, 1858.

A. C. FLECK.

ORPHEUS.

The above named Thorough Bull, will be let to a limited number of thorough-bred cows, the coming season, at my farm, in Coldwater.

Price of service \$15, for the season for three months from date of first service.

Cows placed in my care, at the owners risk, will be well provided for at 50 cents per week.

To speak of his merits is unnecessary to the breeders of this stock. His pedigree annexed is sufficient to show that in purity of blood he is excelled by no animal in the country.

Pedigree.—On side of dam.—1. Songstress, imported, by Snowball, (1846 E.)

2. Melody by Sir Thomas Fairfax 5196.

3. Magie by Wallace 5586.

4. — by Wellington 2824.

5. — by Marmion 406.

6. Daphne by Merlin 430.

8. Nell Gwynne by Layton, 365.

9. — by Favorite 252.

10. — by Favorite 252.

11. — by Hubback 319.

12. — by Snowdon's bull 619.

13. — by Marstell's bull 912.

14. — by Masterman's bull 442.

15. — by the Stud cy bull 620.

Pedigree.—On side of Sire.—Duke of Gloucester, 11332, sired by Grand Duke, 10284, from

1. Duchess 69, by 2d Duke of Oxford, 3646.

2. Duchess 56, by 3d Duke of Northumberland, 3646.

3. Duchess 51, by Cleveland Lad, 3409.

4. Duchess 41 by Belvidere, 1700.

5. Duchess 32, by 3d Hubback 1423.

6. Duchess 19, by 2d Hubback 1423.

7. Duchess 12, by the Earl, 646.

8. Duchess 4, by Ketton 2d, 710.

9. Duchess 1, by Comet, 165.

10. — by Favorite, 362.

11. — by Daisy bull 175.

12. — by Favorite, 252.

13. — by Hubback 319.

14. — by J. Brown's Red Bull.

J. B. CRIPPEN, Coldwater, Mich.

JACKSON NURSERY.

THE Proprietors of the Jackson Nursery having entered largely into the Nursery business, offer for sale a superb stock of

Apple Trees.

Well grown, thrifty, and stocky, of the choicest varieties, propagated with great care, and well supplied with fibrous roots.

We have on hand also a choice lot of

Cherry Trees.

These are large and handsome trees. Also a superior lot of

Pear Trees.

Standard and Dwarf, very stocky and healthy. Dwarfs well furnished with limbs. Also

Peach Trees,

One year old from the bud, of the best varieties, and well grown.

We have also for sale,

PLUM, APRICOT, AND ORANGE QUINCE TREES,

With a general assortment of Small Fruits.

And a variety of Ornamental Trees and Shrubs. Also a superior lot of

Norway Spruce, Balsam Fir, Scotch Pine and American Arbor Vita.

Well cultivated and grown on dry soil. Also a splendid assortment of

Strawberry Plants.

Containing many new and popular varieties, all of which will be sold on reasonable terms, and warranted true to label.

All who desire to purchase trees would do well to examine our stock before purchasing elsewhere.

Jackson, Mich., Oct. 1857.

HARWOOD & DUNNING.

THE CELEBRATED TROTTING STALLION

CROWN POINT BLACK-HAWK,

Will stand for Mares at the Stable of the subscriber in the City of St. Clair.

TERMS \$25 FOR THE SEASON.

Mares proving not with foal entitled to the use of horse next season.
He is a coal black, 15½ hands high, weight 1160 lbs. Has trotted the past winter and without fitting, on a half mile track, ¼ mile in 1:20, also on the same track, ½ mile and turned a stake and back in same track including turning, inside of three minutes.
He was sired by David Hill's Vermont Black Hawk, his dam from imported stock.
St. Clair, April 15th, 1858. H. H. JENKS, Agent.

ESSEX BOAR FOR SALE.

I NOW offer for sale my improved Essex Boar "NERO" Price \$25. He is a first class stock getter, being descended from the celebrated Fisher Fobbs stock. Two first prizes and a diploma have been awarded him at Michigan State Fairs.

Address J. S. TIBBITS, Plymouth, Mich.

THE GREAT ENGLISH REMEDY.

SIR JAMES CLARKE'S

CELEBRATED FEMALE PILLS!

Prepared from a Prescription of Sir John Clarke, M. D. Physician Extraordinary to the Queen.

THIS invaluable medicine is unfailing in the cure of all those painful and dangerous disorders incident to the female constitution. It moderates all excess, and removes all obstructions and a speedy cure may be relied on.

TO MARRIED LADIES

It is peculiarly suited. It will in a short time bring on the monthly period with regularity.
Each bottle, price One Dollar, bears the Government Stamp of Great Britain, to prevent counterfeits.

CAUTION.

These Pills should not be taken by females that are pregnant, during the first three months, as they are sure to bring on miscarriage; but at every other time and in every other case, they are perfectly safe.

In all cases of Nervous and Spinal Affections, Pains in the back and limbs, Heaviness, Fatigue on Slight Exertion, Palpitation of the Heart, Lowness of Spirits, Hysterics, Sick Headache, Whites, and all the painful disorders occasioned by a disordered system, these Pills will effect a cure when all other means have failed, and although a powerful remedy, do not contain iron, calomel, antimony, or anything hurtful to the constitution.

Full directions accompany each package.

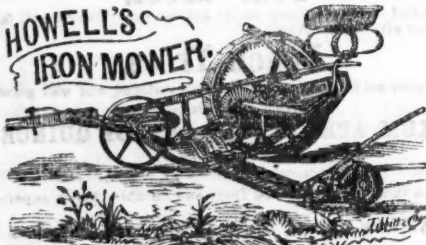
Sole Agents for the United States and Canada,

JOB MOSES,
(Late I. C. Baldwin & Co.)
Rochester, N. Y.

For N. F. \$1.00 and 6 postage stamps enclosed to and any authorized Agent, will ensure a bottle of the Pills by return mail.

For sale in Detroit by J. S. CUTHBERT & CO., J. S. FARRAND T. & J. HINCHMAN, and in one Druggist Store in every town in the United States.
April 1st, 1858. 6m

HOWELL'S
IRON MOWER.



And Combined Reaper and Mower,
PATENTED IN 1857 & 1858.

Manufactured by
CHARLES HOWELL,
Cleveland Ohio.

(Send for Descriptive Circular.)

PUBLIC SALE

25 Head of Shorthorn Cattle, 8 Horses
25 Southdown and Cotswold Sheep
and 40 Suffolk Pigs.

The above stock will be sold at auction on Wednesday, June 16th, at 12 o'clock at the farm of the subscribers. Catalogues furnished on application.

B. & C. S. HAINES,

Elizabeth, New Jersey.

14 miles from New York by New Jersey Railroad. Trains running every hour.

GILMORE'S PATENT BEE HOUSE & HIVE.

I WOULD call the attention of all Apianists to Gilmore's Patent Right, which I will sell in the following counties:

Branch, Calhoun, Cass, Eaton, Genesee, Hillsdale, Ingham, Lenawee, Livingston, Monroe, Saginaw, St. Clair, St. Joseph, Washtenaw, Wayne.

If any parties should desire to have their bees transferred from the old to the new hive, I will do it, and warrant perfect satisfaction.
Address A. F. MOON, P. O. Paw.

FOURTH ANNUAL CATALOGUE

OF

THOROUGHbred NORTH DEVON CATTLE

The property of

C. S. WAINWRIGHT, The Meadows, Rhinebeck, Dutchess Co. N. Y.

THE subscriber has just issued his catalogue for the present season, containing full pedigrees of all the animals composing his herd at this date, terms of sale, &c. He offers at private sale some half a dozen young bulls and about the same number of females; all of them of the very first quality, and either bred or imported by himself. Copies, with the prices marked against such animals as are for sale, may be had by addressing him as above.

C. S. WAINWRIGHT.

April 1st, 1858. 3t

HORSE POWERS, THRESHERS AND CLEANERS.

PATTS 8 and 10 horse, Emery's 1 and 2 Horse (tread) Powers Pease's Eccelior Powers, Corn and Cob Mills, Corn Mill and Feed Mills, Flour Mills, Cross-cut and Circular Saw Mills, Leonard Smith's Smut Machines.
D. O. & W. S. PENFIELD,
may 6m No 163 Woodward Avenue, Detroit.

SEEDS! SEEDS!!

FRESH SHAKER SEEDS, of last years growth and warranted.
ALSO:

Spring Wheat; Sweet Potatoes of several kinds; King Phillip, Floor, Dutton, Eight Rowed and Sweet Corn; Timothy; Clover; Barley; Peas, &c.
At PENFIELD'S, 163 Woodward Ave.

DRAIN TILE!

WE keep constantly on hand the different kinds of Drain Tile
At PENFIELD'S, 163 Woodward Ave.

HARVEST TOOLS!

Of every description on hand and for sale now at PENFIELD'S;
163 Woodward Avenue.

Horse Rakes, Hand Rakes, Garden Rakes, Hay, Manure and Potatoe forks, Grain Cradles, Scythes, Snaths, Scythes, Stones, Corn Planters, Seed Drills, Horse Hoes, Cultivators, Hoes, Spades, Shovels, Corn Plows, Shovel Plows and an endless variety of Farm Implements.
may 6m

CHINESE SUGAR CANE SEED.

WE have the best kinds of seed, raised in Tennessee and warranted pure, which we are selling for \$1 per pound, and sent to any part of the State. Orders promptly attended to at
mail
PENFIELD'S, 163 Woodward Avenue.

THE THOROUGHBRED STALLION

ZINGARO,

From Gipsey, half sister to Mr. Ten Broek's Pryor, will stand for this Season at the Stable of the Subscriber at Burr Oak, St. Joseph county, Mich.

(About half a mile north of Burr Oak Station on the Southern Michigan Railroad).

TERMS:—\$20 for service during the season, and one dollar to the groom, to be paid in cash by satisfactory note at the time of service.

No mare will be insured. All accidents and escapes at the risk of the owner of the mare.
Good pasturage furnished on reasonable terms.

DESCRIPTION.

Zingaro, 1: five years old on the 15th of April, of beautiful dark chestnut in color, and somewhat over fifteen hands high, of great substance, and looking much taller than he is. Porters Spirit of the Times states that "his introduction into Michigan will produce a new era in raising horses there."

PEDIGREE.

There is no horse in the United States, which presents a more direct and excellent pedigree than Zingaro. His dam was Young Gipsey, sired by Mercer, out of old Gipsey, the dam of Pryor, the horse which Mr. Ten Broek took to England with Locomotive and Pryor: Old Gipsey, was own sister to Medoc, by American Eclipse, out of Young Maid of the Oaks, by E. J. edition; she by Spread Eagle from Maid of the Oaks; she from a dam by Sharke, &c. Her father was got by Pegasus who was got by Eclipse.

Young Gipsey's sire was Mercer, a horse imported by Capt. Stockton of New Jersey, sired by Emilius, dam Young Mouse, by Godolphin, g. dam, Mouse by Sir David, g. g. dam Louisa by Ormond, g. g. g. dam, Evelina by Highflyer, out of Termagant, from a daughter of a Regulus mare.

Emilius was the sire of Priam, and on the side of the sire runs back directly through Orville, Benbrough, Kleg Fergus, Eclipse Mares, Squirt, Bartlett's Children, to the Darry Arabian. By the dam Emily, through Stamford, Haphazard, Highflyer, Herod, Tartar, Partner, Jigg to the Byerly Turk.

Imported Trustee, the sire of Zingaro, traces back in a direct line by his sire through Columpus, Gohanna, Mercury to English Eclipse; and by his dam, through Whisker, Waxy, Pot 6-os, to Eclipse again, and by her dam Gibeide Fairy through Hermes, Chrysolite, to Breeze, daughter of Children.

All communications may be addressed to
ap:31

WILLIAM MORRIS,
Burr Oak, St. Joseph Co., Mich.

WILD DAYRELL.

THIS young TROTTING STALLION will stand the coming season, limited to twenty mares, at the farm of the subscriber, adjoining the village of Farmington, 19 miles from Detroit.

TERMS,

At \$20 the season, money to be paid when mare is first served, season to close on the 1st of August.
All mares not proven to be with foal will be entitled to services the following season.

PEDIGREE,

WILD DAYRELL was foaled June 14, 1854, is 16 hands high, mahogany bay, black legs male and tail with two white hind feet, was sired by Kemble Jackson; dam Lady More out of Messenger Maid by M. Marino Paymaster he by Old Membrino, he by Imported Messenger. Membrino Paymaster was the sire of Iola, Membrino Chief, Golish, &c.

Kemble Jackson was sired by Andrew Jackson; dam Fanny Kemble, sister to Miller's Daniel the dam of American Eclipse, Andrew Jackson was sired by the celebrated horse Bashaw, was got by the imported horse Grand Bashaw. The dam of Andrew Jackson was by Whyn't who was sired by Old Imported Messenger. Andrew Jackson was the sire of New York Black Hawk, Jackson, Young Andrew Jackson, and Henry Clay, (the sire of Cassius M. Clay) all noted for speed. Kemble Jackson made the best trot, three miles to a 550 pound wagon, ever made in the world—trotting two heats without a skip in 8.03 and 8.04½.

Good pasture furnished for mares from a distance, at 50 cents per week.

The subscriber will not hold himself liable for accidents or escapes should any occur.

Trotting stock being desirable for all purposes, and being as readily raised as racers, I have procured stallions of the best and most noted blood and such as have been bred from the best trotters which the United States have produced.

F. F. ELDRED

Spring Brook Farm, Farmington, April 1st, 1858.

4t

Apply to GEO. F. GREGORY, Agent.

THE TROTTING STALLION

GLEN BLACK-HAWK.

Will stand for mares the ensuing season, at the Stable of the subscriber on the

GRATIOT ROAD, ONE AND A HALF MILES FROM CITY HALL, DETROIT.

SEASON TO COMMENCE APRIL 12TH, CLOSE SEPTEMBER 1ST.

If sufficient encouragement is given, I will send Black-Hawk to Gross Isle the two last days in each week during the season.

TERMS.

\$12 SINGLE LEAP, \$20 SEASON, \$25 TO INSURE.

Leap and Season Money to be paid when Mare is first served.

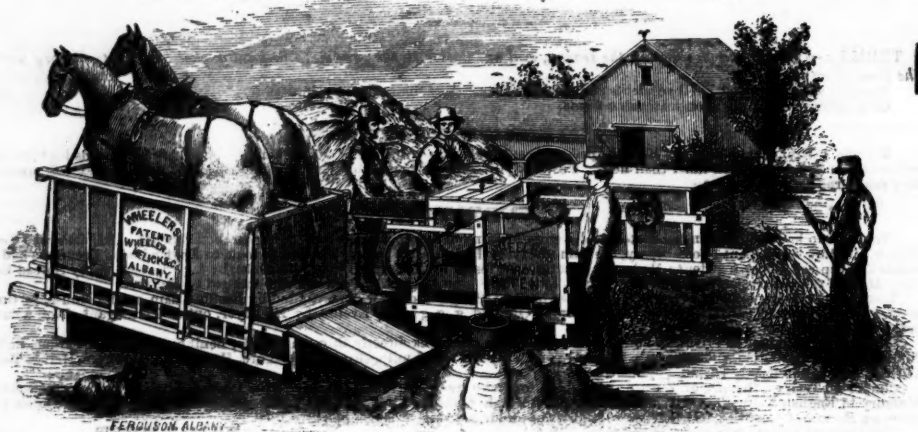
PEDIGREE.

Sire, Lone Star by Old Vermont Black Hawk; dam, Messenger Stock.

R. W. HIGHY.

Detroit, April, 1858.

NEW YORK STATE AGRICULTURAL WORKS, WHEELER, MELICK & CO., Proprietors.



Double Power, and Improved Combined Thresher and Winnower, in operation.

Manufacturers of Endless Chain Railway Horse Powers, and Farmers' and Planters' Machinery for Horse Power use, and owners of the Patents on, and principal makers of the following valuable Machines:

WHEELER'S PATENT SINGLE HORSE POWER,

AND

OVERSHOT THRESHER WITH VIBRATING SEPARATOR.

This is a one Horse Machine, adapted to the wants of medium and small grain growers. It separates grain and chaff from the straw and threshes about 100 bushels of wheat or twice as many oats per day, without changing horses—by a change nearly double the quantity may be threshed. **Price \$125**

WHEELER'S PATENT DOUBLE HORSE POWER,

AND

OVERSHOT THRESHER WITH VIBRATING SEPARATOR.

This Machine is like the preceding, but larger, and for two horses. It does double the work of the Single Machine, and is adapted to the wants of large and medium grain growers, and persons who make a business of threshing. **Price \$160**

WHEELER'S PATENT DOUBLE HORSE POWER,

AND

IMPROVED COMBINED THRESHER AND WINNOWER.

[SHOWN IN THE CUT.]

This is also a Two Horse Machine, and has been much improved during the past season; it threshes, separates the grain from the straw, and winnows it at one operation, at the average rate of 150 bushels of wheat and 300 bushels of oats per day. In out door work, and for persons who make a business of threshing, it is an unequalled Machine. **Price \$245.**

ALSO CLOVER HULLERS, FEED CUTTERS AND SAWING MACHINES.

Our Horse Powers are adapted in all respects to driving every kind of Agricultural and other Machines, that admit of being driven by Horse Power, and our Threshers may be driven by any of the ordinary kinds of Horse Powers in use—either are sold separately.

To persons wishing more information and applying by mail, we will forward a circular containing such details as purchasers mostly want—and can refer to gentlemen having our Machines in every State and Territory.

Our firm have been engaged in manufacturing this class of Agricultural Machinery twenty-three years, and have had longer, larger, and more extended and successful experience than any other in use.

All our Machines are warranted to give entire satisfaction, or may be returned at the expiration of a reasonable time for trial.

Our Orders from any part of the United States and Territories, or Canada, accompanied with satisfactory references, will be filled with promptness and fidelity; and Machines, securely packed, will be forwarded according to instructions, or by cheapest and best routes.

WHEELER, MELICK & CO.,
ALBANY, N. Y.